DOCUMENT RESUME

ED 277 840 CE 046 062

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TITLE Short-Term Vocational Evaluation.
INSTITUTION Wisconsin Univ.-Stout, Menomonie. Stout Vocational Rehabilitation Inst.
SPONS AGENCY Rehabilitation Services Administration (ED), Washington, DC.
PUB DATE May 83
NOTE 199p.
AVAILABLE FROM Stout Vocational Rehabilitation Institute, University of Wisconsin-Stout, Menomonie, WI 54751.
PUB TYPE Reports - Descriptive (141) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Case Studies; Diagnostic Tests; *Evaluation Criteria; *Evaluation Methods; Interviews; Models; Postsecondary Education; *Student Evaluation; Testing; *Vocational Evaluation; *Vocational Rehabilitation; Work Sample Tests

ABSTRACT

This guide is intended to assist vocational rehabilitation counselors in planning and conducting short-term vocational evaluations of clients. The first section discusses the elements that must be included in a comprehensive vocational evaluation. Next, strategies for conducting a vocational evaluation are explained. The next section, a case study of a one-week vocational evaluation, details the following six steps: initial review of the case, referral questions, selection of evaluation techniques, initial intake interview, plan modification, and exit interview. The fourth section includes descriptions of and materials from three model vocational evaluation programs representing three different settings (a vocational rehabilitation facility, a rehabilitation hospital, and a freestanding evaluation unit). David Van Ningen and Wayne Johansen describe the program at the Mankato Rehabilitation Center, Inc.'s Hamlet Project, Diane Aves and Ken Ogren discuss the vocational evaluation program of the Sister Kenny Institute, and Jeb Kaiser and Al Noll explain the program for vocational evaluation of the Vocational Development Center of the Stout Vocational Rehabilitation Institute. A list of references concludes the guide. Appendixes include an initial interview form; a sample case history; and a chart of useful tests and work samples with information on some or all of the following: significance of test scores, norm groups, test administration, test publisher/source, and Dictionary of Occupational Titles (DOT) codes and specific tasks addressed in the test. (MN)

SHORT-TERM VOCATIONAL EVALUATION

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This publication was funded in part by a grant from the REHABILITATION SERVICES ADMINISTRATION, U.S. DEPARTMENT OF EDUCATION, WASHINGTON, D.C.

PREFACE

During the last year and a half, the Materials Development Center has received many requests for a document on vocational evaluation reflecting the need to evaluate persons in a relatively short time period. Analysis of program evaluation data has confirmed this need. As in many similar cases over the past 13 years, MDC has responded by developing an original document to meet the needs of the field of vocational rehabilitation.

This publication describes how to plan and conduct a thorough vocational evaluation within a one week time period. No magic processes and no shortcuts are involved in this procedure. Rather, each evaluator must carefully plan how to best answer the client's referral questions by using the most appropriate assessment techniques. Thus, the theme of this publication is careful planning with flexibility. The first part of the monograph contains planning strategies and an example of their use. The second part is a detailed description of three model programs that evaluate clients in one week or less. One caution is necessary. While most clients can be accurately evaluated in a shorter time period than formerly believed possible, some severely disabled persons, and especially those without a significant work history, may require additional time.

I would like to thank all the people who provided material on the model programs: David Van Ningen, Wayne Johansen, Diane Aves, Ken Ogren, Jeb Kaiser and Al Noll. A special thanks goes to David Van Ningen for his cooperation on this as well as previous ventures. Appreciation also goes to Ms. Arlyn Treadwell who typed this document and to her constant belief that I should never be trusted with an original copy of anything.

Karl F. Botterbusch, Ph.D.

May, 1983

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I. Introduction

Up to fairly recently it was the rule, rather than the exception, for vocational evaluation units to receive referrals ranging from two to four weeks in length. It was also the practice of many referring agencies to sponsor a client for a several month period of extended evaluation, usually in a sheltered workshop. These lengthy vocational evaluations reflected three philosophies and practices: First, the purpose of vocational rehabilitation has been to enable each client to reach his/her highest level of functioning, personally and vocationally. This resulted in an expressed need to evaluate a person for a wide variety of job and training options; this process also was intended to give the client time for vocational exploration. These options were often followed up by long periods of work adjustment, vocational training, and independent living services. Second, state vocational rehabilitation agencies (DVR) have had a specific mandate to serve the severely disabled. Because of the nature of this population, lengthy periods of time have been needed to obtain accurate information both from the client and about the client. Third, and perhaps the most realistic, funds were available to sponsor clients in long-term programs. Thus, each DVR counselor, most manpower coordinators, and many school counselors had the funding to finance a relatively lengthy period of vocational evaluation. Because of fiscal constraints, this situation has changed during the last two years. The philosophy of having each person reach their maximum potential has been replaced by a new pragmatic concept of evaluation to assess current skills and to provide direct placement. The fuel for the whole rehabilitation machine is federal, and to some extent, state money. Presently there is a fuel shortage which, regardless of philosophy, has forced the field of vocational rehabilitation to accept new realities. While these funding cuts are seen by many as unreasonable, the reality is that as professionals we must provide the most efficient services possible with what funds are presently available.

One of the ways to provide effective services to disabled persons is to develop procedures which enable the accurate assessment of vocational potential within a short period of time. As implied above, the approach becomes even more streamlined when evaluation results are followed up by direct placement. In order to place this trend in proper perspective, remember that persons who are severely disabled and/or persons with little or no employment history may not be accurately evaluated within a limited time. While this publication describes a shorter vocational evaluation period, this does not imply that there is only one model (i.e., assessment leading to direct placement) that is appropriate for all disabled persons. While most persons can be adequately evaluated in a week or less, some will need significantly more time.

What Needs to be Included - Regardless of the time period, all vocational evaluations need to include an assessment of physical, intellectual, social, personal and behavior factors that comprise the uniqueness of each individual. Beyond this very general knowledge are specific areas. The Commission on Accreditation of Rehabilitation Facilities' Standards Manual (1980) lists a total of 14 vocational aspects: physical and psychomotor capacities; intellectual capacities; emotional stability; interests, attitudes, and knowledge of occupational information; personal, social and work history; aptitudes;

achievements; work skills and work tolerance; work habits; work related capabilities; job seeking skills; potential to benefit from further services; possible job objectives; and the individual's ability to learn about him/herself. This is a long list for an evaluator to complete even if he/she has several weeks to assess the client.

The six areas listed below are the most critical when evaluating disabled persons. These six areas begin with the basic determination of the client's history, then attempt to assess present physical capacities, present academic skills, and psychological stability. The assessment of aptitudes and interests can be used to point the way to new occupational areas. Data from all six areas are needed to produce a final evaluation report containing realistic recommendations and goals for the client:

1. Case History - Before planning how to evaluate the client and deciding the best way to answer the referral questions, the evaluator must know the client's history. While some of this history should be present in the referral information, the evaluator must gather data on the client's personal, educational, employment and medical history and present level of activity. This information is needed both to develop the evaluation plan and to prepare the evaluation report. If the report is to be used in litigation, this information must be complete and accurate; many questions of transferability of skills and percentage of disability will be based on these data. The personal, educational, employment, and medical history establish many of the parameters for the evaluation and to a considerable degree spell out the present limitations of the client.

Information on personal, educational, employment and medical history and present activities is usually obtained during the initial interview. While little outside documentation is needed for personal, educational, and employment history and present activities, medical history is different. Here the evaluator must have the complete medical records of the client as they pertain to his/her disability. This includes psychologist, psychiatrist, and counselor reports. Medical records are extremely important when establishing physical, environmental and emotional limitations on the activities of the client. Functional limitations must be clearly defined prior to physical capacity and coordination tests.

The Initial Interview Form (Appendix A) was developed as an aid in obtaining a complete case history. When using this form, the evaluator selects items relevant for each client. Some of the data usually obtained on all clients is given below:

Personal History - Marital status, family members living with client, amount and source of family and individual income, and major debts.

Educational History - Schools attended and graduated from, apprenticeships, licenses, and estimated literacy level based on present activities.

Employment History - Military; major jobs held for at least the last 15 years and description of the tasks of these jobs.

Medical History - Recent surgeries, hospitalizations, and present treatments related to disability, medication and restrictions (NOTE: Client self-reports in the medical area must be collaborated with medical documentation).

Present Activities - Daily activities, self-description of functional problems and physical limitations.

Major inconsistencies between the initial interview results and referral information should be noted and discussed with the client.

2. Physical and Psychomotor Capacities - Physical capacities are the person's limitations in performing certain body movements that are potentially job related. Typically, physical capacities are assessed according to standardized definitions found in U.S. Department of Labor publications, such as Handbook for Analyzing Jobs (1972) and the Selected Characteristics of Occupations Defined in the Dictionary of Occupational Titles (1981). These capacities are listed below and are defined in detail in the two publications cited above:

(a) strength - sedentary, light, medium, heavy, and very heavy

(b) worker positions - standing, walking, and sitting

(c) worker movement of objects - lifting, carrying, pushing, and pulling

(d) climbing and/or balancing

(e) stooping, kneeling, crouching and/or crawling

(f) reaching, handling, fingering and/or feeling

(g) talking and/or hearing

(h) seeing.

Usually physical capacities are reported using the above terms as defined by the Dictionary of Occupational Titles (DOT). Because federal and state agencies and legal systems use these DOT definitions, these have come to be the accepted standard. Therefore, if an evaluation report will be used in any form of litigation, it is a necessity that it contain a physical capacities assessment which uses terms as defined in the DOT. When possible, these physical capacities must also be quantified. It is not enough to know that a client can reach, we also need to know to what height (e.g., shoulder level, overhead) and how frequently (e.g., once a day, twice a day or every 15 minutes). This becomes important when dealing with direct placement and job modification.* In short, physical capacities must be quantified as much as possible and must use accepted DOT definitions.

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*The physical capacity and environmental conditions sections of the new A Guide to Job Analysis (DOL, 1982) qualify specific factors to a much greater extent than the Handbook for Analyzing Jobs. The Guide is more appropriate when dealing with placement and job modification; the Handbook for litigation.

Psychomotor capacities are the basic coordination of the body as a whole (e.g., standing on one leg) or with one specific part of the body as a whole (e.g., with arm initially extended, touch the finger to the nose). These can be assessed either with standardized techniques (e.g., McCarron & Dial, 1976) or through the use of behavior observation.

3. Academic Achievement - Simply stated, "academic achievement" is the degree of reading, writing, spelling, and mathematics literacy possessed by the client. This should be determined early during the evaluation period so that the evaluator can plan tests and work samples that are consistent with the client's reading level. For example, nonreading interest inventories and aptitude tests would be used for a client with very low literacy skills. Beyond making the evaluation more meaningful for both client and evaluator, there are two major reasons for assessing academic achievement. First, reading, writing and mathematic skills are a prerequisite for almost every vocational training course. If one of the client's options is formalized training, then it must be known if the client can benefit from that training. Second, literacy plays a large part in direct placement. It is fairly common for a worker unable to perform medium or heavy work to be assessed for interests and aptitudes for sales or clerical occupations. A lack of literacy skills severely restricts client's options to occupational areas not requiring any significant degree of reading and writing.

The most efficient method of determining functional literacy is through the use of standardized achievement tests, such as the Adult Basic Learning Examination (ABLE), the Wide Range Achievement Test (WRAT), or the Basic Occupational Literacy Test (BOLT). When selecting an achievement test, the content should be of adult interest and the normative data must be of recent origin. Results are usually reported in grade equivalence, allowing for a fairly straightforward interpretation. Other ways of assessing literacy are through the use of clerical work samples, vocational exploration materials, and the use of job placement activities, such as writing a resume or a letter of application. In summary, regardless of the method or methods, the funcational literacy must be assessed early in the evaluation period and the results used to develop vocational goals.

4. Aptitudes - "Aptitude" is the capacity or potential to learn or to develop proficiency in a particular task, job, or area of work. Thus, an employer hiring machinest's helpers would assess the mechanical aptitude of employees for these positions. Since the mid-1930's, psychologists have investigated the specific aptitudes required for a particular job and have attempted to select persons with the aptitudes that match these jobs. This trait-and-factor approach to job selection and job placement is still the basic method used by many large employers, the military, and the U.S. Employment Service.

In assessing aptitudes, the evaluator needs to use this matching process. He/she must be able to relate the specific aptitudes required to successfully perform each job or group of jobs with the client's specific aptitudes in these occupations. This involves knowledge of two sources of data: job requirements and the client's aptitudes. Specific information on the aptitudes required for jobs is most readily obtainable from publications based on U.S. Department of Labor job analysis data. Presently all job

aptitude data are based on 11 specific aptitudes: G-general learning ability; V-verbal; N-numerical; S-spatial; P-form perception; Q-clerical perception; K-motor coordination; F-finger dexterity; M-manual dexterity; E-eye-hand-foot coordination and C-color discrimination.* These aptitudes are defined in the Handbook for Analyzing Jobs (DOL, 1972) and A Guide to Job Analysis (DOL, 1982). While the aptitude profiles for specific jobs listed in the fourth edition of the DOT have not been published by the federal government, these profiles are available for each job listed in the DOT from several private sources:

1. VDARE - Classification of Jobs (Field & Field, 1980)

2. Vocationology, Inc. - The Encyclopedia of Job Requirements (McCroskey & Perkins, 1980)

3. Ability Information Systems - A computerized job-matching process.

When measuring clients' vocational aptitudes, the evaluator has an almost limitless variety of paper-and-pencil tests and work samples from which to select. A review of the Mental Measurements Yearbooks (Burros, 1972, 1978) will provide the evaluator with tests for any specific aptitude he/she wants to measure. An older but still useful publication is Psychological Testing in Vocational Evaluation (Botterbusch, 1978). In addition to testing, the evaluator can also use numerous commercial work samples to assess a variety of general and specific aptitudes (Botterbusch, 1982).

For nonprofit organizations, the most useful method of measuring the vocational aptitudes of a literate client is to use the U.S. Employment Service's General Aptitude Test Battery (GATB). This three-hour multiple test battery provides a valid measure of aptitudes G, V, N, S, P, Q, K, F and M as listed above. Eye-hand-foot coordination and color perception must be measured by other tests or work samples. Besides being directly related to the individual aptitude profiles in the DOT based publications, the GATB results can be related to specific job requirements and more general groupings of jobs through the Occupational Aptitude Patterns (U.S. Employment Service, 1980a, 1980b).

In conclusion, when assessing for aptitudes, it is important to evaluate the client's level on the 11 aptitudes listed in A Guide to Job Analysis; other specific aptitudes, such as mechanical and artistic, should be measured as the need arises.

5. Vocational Interests and Attitudes - A client is much more than physical capacities and vocational aptitudes. Physical capacities and aptitudes tell what the client can do; interests and attitudes towards work tell what the client wants to do. The accurate assessment of interests is especially critical to people having no work history and to those who, as a result

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*There are many more vocationally significant aptitudes than these 11 that may need to be considered. However, because these 11 have been successfully used for numerous years by job analysts and psychologists, the present publication will center on these.

of accident or injury, must change their occupational field. In vocational evaluation, interest is usually determined in three ways: expressed interest, work samples, and interest inventories. In expressed interest, the client simply tells what jobs or occupational areas are attractive to him/her. This method has several problems and is only partially useful. Even though a person may have been employed in a variety of different jobs, most people's expressed vocational interests are based on a very limited view of the world-of-work. Another problem with expressed interests is that the client's interests may be strongly related to his/her perceptions of what skills, aptitudes, and training are required for a particular job. The person may like a particular occupation but fails to express an interest because he/she believes they could not get that type of job. The final problem with expressed interests is that the client really is not exposed to any new information; he/she only reorganizes old data and inaccurate perceptions in a new way.

(Vocational exploration should be used, as time permits, as a method of expanding the client's knowledge about jobs and their requirements. This can be a separate process of information giving or it could be related to the administration of work samples. Vocational exploration must include current information about the labor market.)

Most work samples are able to combine the assessment of skills with the determination of interest. At the same time they also provide the client with systematic vocational exploration. The evaluator has two general methods of determining client interest on a particular work sample. The first is through client self-report. This can take the form of client self-rating instruments or simply be a verbal report given to the evaluator. Second, the evaluator uses behavioral observation of the client to help determine interests. The time spent on the task, facial expressions, quality of workmanship, and types of questions asked the evaluator are some examples of behaviors which may indicate interest.

The third method of assessing interest is through interest inventories. As with aptitude tests, there are numerous inventories described in the Mental Measurements Yearbook. These range from picture inventories like the Wide Range Interest-Opinion Test (WRIOT) to the Strong-Campbell Vocational Interest Inventory (SCVII) aimed mostly at college bound or college educated populations. Some inventories are specially designed for skilled blue collar jobs (e.g., Minnesota Vocational Interest Inventory); others are aimed at mentally retarded persons (e.g., AAMD-Becker Reading Free Vocational Interest Inventory). With the exception of the U.S. Department of Labor's USES Interest Inventory, none of the widely used inventories are organized around the 12 interest areas in the DOL's Guide for Occupational Exploration (1979). This is unfortunate because this publication provides a direct link to the DOT, thus permitting the combining of interests and job requirements.

In assessing client interest, the evaluator is often forced to work in a rather subjective area in which he/she has to combine client self-report data, behavioral observations, and interest inventory results. This is made more difficult by the fact that each interest inventory has its own interpretation of the organization of the world-of-work which is usually not realted to any other inventory or to the DOL publications. Thus, the key in this area

is to combine several sources of data into results which can be interpreted to the client in a common sense way.

6. Psychological and Emotional Stability - This is the most subjective of the six areas and, therefore, the most difficult to evaluate. Here the evaluator is mostly dependent upon a few test results (most commonly the MMPI which must be interpreted by a licensed psychologist), medical records, interview data, behavior observations, and client self-reports. The purpose of this type of assessment is to determine if the client is emotionally and mentally stable enough to pursue training or to get and keep a specific job. Many clients with lengthy work histories will have self-perceptions of themselves as productive workers; injury or illness has shattered this image. A fairly high percentage will be depressed; others show emotional problems through increased usage of alcohol or illicit drugs; others will not want to risk the security of a worker's compensation or SSDI check, however small, for the stress of competing in the open labor market and still others will be thoroughly convinced that they are totally disabled because they can't perform their former job. If a client has a history of emotional or mental problems, a disabling injury or illness usually makes these problems worse.

In evaluating for psychological and emotional stability, the profession should be concerned with these problems as they relate to vocational goals. Finally, because most evaluators are not qualified psychologists or other mental health workers, problems should be stated in behavioral terms and avoid the use of jargon.

In conclusion, the above six areas are seen as the critical areas that must be covered in any evaluation, be it one week or four weeks. While the degree of emphasis on each will be dependent upon the problems of each client, each evaluation needs to cover each of these areas.

Evaluation Becomes Assessment - The uniqueness of vocational evaluation is that it combines several different techniques (i.e., testing, work samples, job trials) and different types of data (i.e., behavioral observations, self-report, job analysis) to present a complete description of a person's vocational potential as well as interests, needs and problems. The process of vocational evaluation is based upon the close interaction, trust, and sharing between the client and the evaluator. Both actively participate in this process through a mutual give-and-take and both plan to reach certain agreed upon goals. Besides this active interaction of client and evaluator, vocational evaluation usually aims for a thorough and complete understanding of the client as a potential worker. Finally, evaluation requires a considerable degree of professional judgment, much of which is subjective. Vocational evaluation can be defined as:

> A specialized form of clinical assessment requiring a specialized technology and environment, requiring a period of several days or even weeks of close observation and judgment, characterized by the use of real or simulated work tasks and activities in a situation which stimulates some of the demands of work environments (VEWAA, 1975, p. 86)

This definition should be expanded to include the client's vocational development as a goal.

Assessment is the "process of finding out what the strengths and limitations of an individual are in terms of optional functional outcome and developing proposals for alternate service plans" (VEWAA, 1975, p. 86). To use an analogy, assessment is to rehabilitation services what diagnosis is to medicine. While vocational assessment uses the same techniques and methods as vocational evaluation, assessment is a more one-way process where clients' vocational strengths and weaknesses are determined by the evaluator. Because it deals with the basics of client capabilities, physical limitations, vocationally relevant aptitudes and functional literacy, assessment is more limited in scope than evaluation. Assessment usually has little concern for vocational exploration, interests, and attitudes and tends to confine itself to the immediate skills available.

The major differences between vocational evaluation and assessment are not in the methods and techniques used; the differences are in the type of information obtained and the participation of the client. Evaluation attempts to obtain more clinical information on client interests and personal concerns and in return to provide the client with information and experiences that may expand his/her vocational horizons. In other words, assessment gathers data about the client; evaluation gathers data with the client. In addition, evaluation provides the client with new information and experiences. The most important difference between evaluation and assessment is the participation of the client. During the evaluation process, the client plays an active role in the course of the process by learning more about his/herself, exchanges with the evaluator, and setting vocational goals.

The point of view of this publication is that the major difference between assessment and evaluation is not the technique used or the time spent with the client, it is the active participation of the client in the entire evaluation process. While it is more difficult for the client to participate when time is a major concern and when certain information must be obtained, the client must be an active participant in his/her own evaluation.

Don't let vocational evaluation become assessment and use limited time as your reason.

Goals for Clients and Evaluators - Prior to the beginning of the evaluation process, both clients and evaluators must set goals. These process goals should not be confused with the outcome goals arising from the referral questions. A careful following of process goals will permit the evaluator to provide a high quality service in a short time period. More important, process goals will serve as a reminder that the evaluator is performing vocational evaluation and not vocational assessment. The three process goals for evaluators are:

- To obtain the information needed to answer the referral questions: The purpose for evaluation is to provide the referral source with a written report that answers the referral questions in the best possible manner. Since the major objective output of the evaluation process is the evaluation report, it is absolutely necessary that the evaluator directly answer the referral questions in that report.

- To accurately determine client's vocational assets and liabilities: This goal calls upon the evaluator to select the procedures and techniques that will accurately evaluate the client's vocational abilities. This process of knowing what tools will be most effective for each particular client requires a significant degree of insight in a short period of time. The thrust of this goal is upon accuracy, not upon speed.

- To provide opportunities for client self-assessment and exploration: Either as part of the processes of answering the referral questions or as a separate process, the evaluator needs to make available experiences which will give the client opportunities for self-assessment and vocational exploration. The evaluator can use these experiences to increase the client's horizons and to give him/her a subjective opinion of what he/she can or can't do.

Besides trying to achieve these process goals, the evaluator also has the obligation to make sure that the client is an active partner in the process and that the client obtains new and useful information on his/her vocational abilities and potential. Part of the initial interview should be used to explain to the client that he/she is to use the evaluation time to gain insight into his/her own vocational behavior. The goal to be taught clients is:

- To actively participate in the evaluation process - As a result of the process, the client should be capable to be objectively aware of his/her vocational assets and liabilities and to be capable of establishing vocational goals within the limits of his/her abilities. Finally, the client will be able to explore new areas of work.

This introductory section contained what should be covered in all vocational evaluations, regardless of length, the differences between evaluation and assessment, and how the evaluator can insure that evaluation will occur even if the time is limited. The next section will present practical ways of providing quality evaluation within a limited time period.

II. Strategies

Clearly Establish Priorities - When receiving a referral the first step is to carefully review the given information, study the referral questions, and begin to decide how these questions can best be answered. Here the evaluator compares what is being asked by the referral source with what can be done within the evaluation period. If there are few referral questions or if the questions lend themselves to a straightforward methodology (e.g., Does Mr. Jones have the manual dexterity necessary to be placed as a welder apprentice? Does Mr. Green have sufficient literacy skills to benefit from a vocational course in electronics inspection?), then there will be few problems with evaluation planning. However, if the questions are vague, too complex, or simply too many, then the evaluator must begin to clearly establish priorities. While the final decision on what referral questions to answer must wait until after the initial client interview, there are preliminary steps:

- If all referral questions can be answered, rank order them in order of importance: Some questions will be much more important to the evaluation process than others. For example, questions on physical capacities (e.g., Can Ms. Nelson reach above shoulder level at least 20 times during the course of an eight hour day?) or aptitudes (e.g., Does Mr. King have spatial perception necessary to be a floor covering installer?) would usually receive a higher priority than questions on interests (e.g., Does Ms. Brown have the interest in becoming a cashier?). Because they establish vocational parameters, questions dealing with the client's major disability should be answered first. Before attempting to provide an emotionally disturbed person with information on low stress jobs, the evaluator needs to determine if the client has any specific behaviors that would prevent this person from being employed in any job.

- Are there referral questions that cannot be answered: Some referral questions cannot be answered regardless of how much or how little time the evaluator has. Some referral questions call for medical or psychological diagnoses that are completely outside the evaluator's area of professional expertise. A question about the tolerance level of a person with a respiratory condition to dust and fumes has definite vocational implications, but cannot be answered by the evaluator.

- Are there referral questions that need to be restated: Frequently evaluators will receive only a very general referral question, such as "What is the client's potential for competitive employment?" "Does Ms. Brown have the skills necessary for employment?" or "Does Mr. Hill have the potential to get off of SSDI?" While in theory the evaluator could answer these vague questions, the period of time needed for trial and error decision making and the subsequent administering of numerous tests and work samples could take several weeks if not months. In dealing with vague questions, the evaluator should first review other referral information and attempt to write specific questions that he/she can answer. The referral source should be contacted; the evaluator and the referral source must restate general questions into several specific questions. For example, instead of

asking if Mr. Hill can get off of SSDI, a series of specific questions would be asked: Is he capable of performing sedentary work, as defined in the DOT, for a sustained period of at least six hours per day; can he sit in one place for at least two hours at a time; can he stand for at least one hour at a time; can he reach, grasp, feel, and manipulate small parts, hand and power tools; can he read well enough to follow simple instructions; and can he be trained for a semiskilled job in less than six months?

Prior to the initial interview with the client, the evaluator needs to list the most important referral questions to be answered during the evaluation period. The final input comes when these are shared with the client. Based on the interview data and discussion with the client, the evaluator should be able to determine if the client's needs are different from his/her needs as reflected in the referral questions. Here any conflicts and differences will have to be resolved. This is especially true if the client has definite ideas about his/her vocation future which are different from what is implied in the referral questions. The referral questions may deal with inspection and clerical areas, while the client is determined to become employed in light production work.

The final point in establishing priorities is the setting of limits. Vocational rehabilitation has shifted from long-term training and provision of services to a direct placement model. Because this model deals with the client in his/her present condition, the role of the evaluator is often to limit evaluation to: (1) realistic jobs that are available within the current labor market, and (2) training that will provide placement in a skilled or semiskilled occupation. By following these two conditions, the strategy is to limit client options and then to thoroughly assess for jobs within these options. Thus, a referral question about abilities for vocational training could be interpreted to mean ability to complete a two year drafting program at the local voc-tech school instead of a B.S. degree from the state university. Referral questions on placement could mean immediate placement within the local economy, if possible.

Using Time Wisely - The second major strategy for getting the most from the available time is to find, select, and use techniques yielding the most useful data in the shortest period of time. In answering the referral questions, the evaluator must be able to obtain data from many sources. The decision process is to know where to obtain these data and what trade-offs have to be made between accuracy, cost, and time.

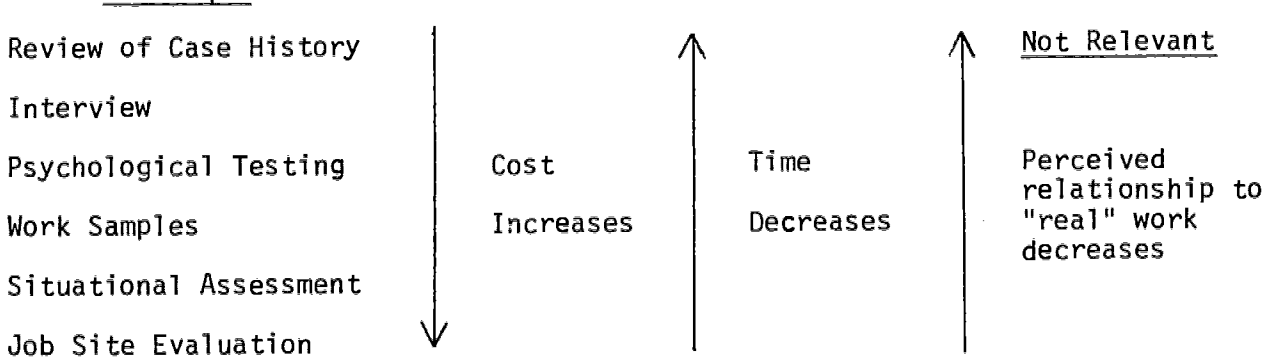
The first place to look for information to answer a referral question is in the client's file. Existing medical, vocational, and personal information supplemented with data obtained during the initial interview already provide you with information on the client. Recent medical reports on physical capacities and specific medical conditions help to answer questions about present physical limitations. Reports and treatment notes by physical or occupational therapists are very useful when setting physical limitations for a disabled person. Information received from psychiatrists and clinical psychologists helps the evaluator to focus on the behavior problems of the client. Results of recent intelligence, achievement, and personality tests help to establish functional limits and eliminate the need for some testing. If already

existing information is of recent origin and comes from a competent professional, it can and should be used to answer the referral questions. Stated as an axiom this becomes:

IF RECENT, ACCURATE INFORMATION IS ALREADY AVAILABLE ON A CLIENT, USE IT TO AVOID DUPLICATION OF EFFORT.

Most writers (e.g., VEWAA, 1975; Pruitt, 1977) state that vocational evaluation uses four major assessment techniques: psychological testing, work samples, situational assessment, and job site evaluation. To these are added a review of the case history and the (initial) interview. While each of these six techniques is useful, they are not mutually exclusive. An evaluator can obtain information on finger dexterity from the client's job history, the Purdue Pegboard, a small parts assembly work sample, a job on an assembly line in a sheltered workshop or on a job site evaluation at Tonka Toys. Likewise, interest in clinical occupations can be assessed during the initial interview, by interest inventories, filing, bookkeeping, and typing work samples, being a receptionist in the rehabilitation center, or filing travel records at a state office building.

When planning the evaluation, the evaluator decides on what techniques to use. This decision involves trade-offs between three major variables: cost, time, and perceived relationship to "real" work. The six techniques and their relationship to these three variables can be diagramed as follows:



The cost of each technique increases from the review of case history to job site evaluation; the time to obtain the information decreases from job site evaluation to a review of the case history. The client's subjective perceptions of the relationship of each technique to the world of work decreases from job site evaluation to interview. Because the client rarely participates in reviewing the case history, this technique is not relevant to the relationship-to-real work variable.

While this scheme offers the evaluator a general strategy for evaluation planning, it does not deal with the problem of accuracy. The major goal

of a short-term evaluation is to obtain accurate data to answer the referral questions in a short period of time. The accuracy of the information obtained about any client using any specific technique depends upon the interaction between the client and the requirements of the specific technique. It also depends on the purpose for using each technique. For example, if the evaluator needs to assess the motor coordination and spatial perception aptitudes for a literate person who has use of his/her upper extremities and has no sensory problems, accurate data could easily be obtained through testing. If the client's literacy skills were so limited as to preclude paper-and-pencil testing or if he/she had problems with the upper extremities, then the evaluator would use one or more work samples that could be modified to meet the client's specific needs. If the client were more severely disabled, then a situational assessment approach would be tried. A second example involves assessing a client's interests while providing vocational exploration. While some interest determination could be performed through paper-and-pencil testing and interviews, the evaluator may consider these approaches too abstract for a lower functioning client. He/she could administer a series of relatively short work samples or plan for several situational assessments at various stations in the workshop. The evaluator should:

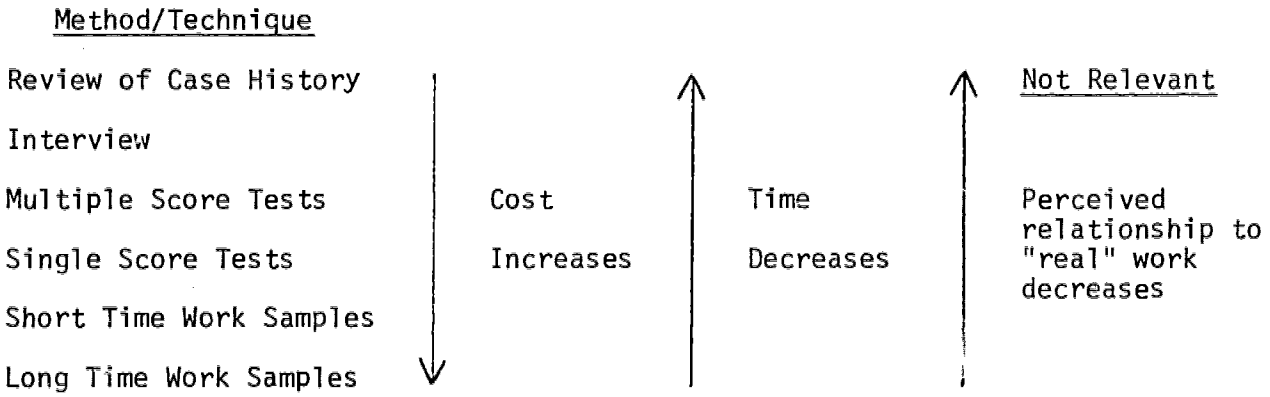
USE THE TECHNIQUE THAT PRODUCES THE MOST ACCURATE DATA IN THE SHORTEST TIME.

This axiom creates a potential problem with the client's subjective perceptions of the relationship between the various techniques and the reality of work. Whatever technique is used, the evaluator has the responsibility to relate it to the client's vocational goals. During the initial interview the client should be told that his/her job history is a good starting point to determine future employment; most clients are perfectly capable of understanding the transfer-of-skills concept if explained in specific terms and with specific examples. If tests are administered, the evaluator must relate each administration to the referral questions and the client's vocational goals. While work samples, situational assessment, and, especially, job site evaluation do not require as much explanation as do more abstract methods, the client must still be aware of each technique's relationship to real work. Thus, the perception of the technique-real-work-relationship must be clear to the client before any assessment device can be administered. If the evaluator cannot make this point clear, then he/she should consider using another assessment method. This need to consider the client's perceptions of the evaluation process leads to the next axiom:

THE CLIENT MUST UNDERSTAND THE PURPOSE OF WHATEVER EVALUATION TECHNIQUE IS ADMINISTERED.

If the vocational evaluator must complete his/her assessment of a disabled person in a week or less, it is very unlikely that he/she will have

time to use either situational assessment or job site evaluation. This effectively reduces the list of available techniques from six to four: case history review, interview, psychological testing, and work sample administration. However, selection based on the cost-time inverse relationship from these four methodologies is still a valid decision making process. The evaluator can refine this process by making finer discriminations than just "tests" and "work samples." Tests could be divided into those yielding large or small amounts of specific information within a set time period. For example, the Differential Aptitude Test and the GATB provide several vocational aptitude scores and take less than three hours to administer. Other more specific aptitude tests may take 30 to 45 minutes to yield a single aptitude score. Work samples could be divided into those that require over two hours to administer to the average client and those that can be administered in less time. A more realistic model for decision making within a short period of evaluation would be:



When planning short-term evaluations, the review of the case history and the initial interview will most always be used. The most practical strategy is to decide which referral questions are not answered from these two data sources and then to select from the remaining four techniques listed above. To repeat, when selecting specific techniques, the evaluator should use the following axioms:

IF RECENT, ACCURATE INFORMATION IS ALREADY AVAILABLE ON A CLIENT, USE IT TO AVOID DUPLICATION OF EFFORT.

USE THE TECHNIQUE THAT PRODUCES THE MOST ACCURATE DATA IN THE SHORTEST TIME.

THE CLIENT MUST UNDERSTAND THE PURPOSE OF WHATEVER EVALUATION TECHNIQUE IS ADMINISTERED.

One of the most useful evaluation methods is systematic behavioral observation. Data from observations are as important to answering referral questions as test scores and work sample results. Behavior observations are often used to answer referral questions on personality/psychological problems such as: frustration tolerance, ability to work closely near other persons, acceptance of supervisor, and attention span. Behavior observation is one of the more accurate ways of assessing interests. The amount of time spent on a task, facial expressions while performing a task, inquiries for occupational information in a specific area, the quality of work performed and verbal remarks are frequently indications of interest. Physical capacities estimates must be collaborated by behavior observation; self-reports often exaggerate or minimize, physician's estimates can be liberal or conservative, and occupational therapists assessments can yield results based on maximum performance, not typical performance. The evaluator must spend time observing the client as he/she walks around the rehabilitation center, sits during test and work sample administration, stands while talking with others, reaches while putting on a coat, or bends to pick up a dropped tool. The evaluator will often administer work samples that measure physical capacities at the same time they assess aptitudes or interests. A small parts assembly task assesses reaching and sitting capacities, as well as dexterity, perception, and interest in performing routine work. Cutting wood on a table saw permits assessment of standing, bending, lifting and carrying. This need for accurate behavior observation leads us to the next axiom:

SELECT TECHNIQUES THAT PERMIT BEHAVIORAL OBSERVATION AS WELL AS THE COLLECTION OF OTHER DATA.

The next method for the wise use of time is to select assessment instruments providing multiple data during the same administration. Rather than selecting a lengthy filing by numbers-and-letters work sample that measures only filing skills, the evaluator could use a work sample that includes the use of a typewriter and/or calculator as well as filing. The idea is to use instruments that will provide data on many aptitudes and skills at the same time. Thus, a carburetor repair task can assess fine finger dexterity, sitting tolerance, and three dimensional perception. Unless a lengthy assessment of a specific aptitude, skill or single trait is critical, the evaluator would be advised to avoid the use of isolated trait work samples that assess only one characteristic. A caution needs to be added--the work sample or test must contain enough different job tasks or job elements to assure accurate assessment of all the aptitudes and skills that are measured. In choosing multiple use work samples, the evaluator should carefully read the work sample administration and scoring instructions to determine what the work sample really measures. For example, the VITAS Calculating Work Sample (#13) claims to measure numerical ability, clerical perception, and finger dexterity (JEVS, 1979). The evaluator should carefully review the tasks of this work sample, as well as any job analyses on the work sample, to make certain that the work sample does indeed assess what it claims to. In summary, the multiple data devices but make certain that they contain enough substance in the form of different tasks to measure what they claim. The axiom is:

WHEN POSSIBLE, USE ASSESSMENT DEVICES THAT PRODUCE MULTIPLE DATA.

Another method of saving time is to use group administered devices. This is, of course, most common in psychological testing. A group administered literacy test, aptitude test, or interest inventory can yield large amounts of useful data in a short period of time. This practice is especially helpful when administering tests usually given to all clients. If common precautions (i.e., making sure the client can read the instructions, can understand the practice items, and can physically perform the act of test taking) are followed, then a group administered test is one of the most efficient methods for assessment (Botterbusch, 1978). Group administration can be extended to work samples. Unfortunately, the only group work sample in wide usage is the Integrated Peer Performance (Valpar, 1977). This work sample permits assessment of the four clients as small parts assemblers and one client as an inspector. Administration time is about two hours. In addition to being able to evaluate up to five clients in a two-hour period, the work sample also provides an excellent opportunity for behavior observation. Evaluation units could develop their own group tasks to simulate a production line or an office setting where close cooperation and following well-defined procedures are as necessary for job success as clerical skills. Thus, a well-designed group assembly work sample could give useful data on several perceptual and dexterity aptitudes, acceptance of supervision, peer cooperation, and ability to work under speeded conditions. The time-saving rule is:

USE GROUP ADMINISTERED TESTS AND WORK SAMPLES WHEN POSSIBLE.

The final suggestion for using time wisely deals with ways of presenting occupational information material. Because many clients have reading problems and because most people learn more in a shorter period of time through audio-visual materials, these materials (e.g., films, slides/cassette tapes) should be used where possible to provide the client with occupational information. These materials have the added advantage of being capable of group use (see above paragraph). The obvious axiom is:

USE AUDIOVISUAL OCCUPATIONAL INFORMATION MATERIALS WHEN POSSIBLE.

This section has presented methods for increasing efficiency by establishing priorities and using time wisely. The next section will take a case history and demonstrate how these principles will apply to an actual case. The axioms to be used in planning are:

IF RECENT, ACCURATE INFORMATION IS ALREADY AVAILABLE ON A CLIENT, USE IT TO AVOID DUPLICATION OF EFFORT.

USE THE TECHNIQUE THAT PRODUCES THE MOST ACCURATE DATA IN THE SHORTEST TIME.

THE CLIENT MUST UNDERSTAND THE PURPOSE OF WHATEVER EVALUATION TECHNIQUE IS ADMINISTERED.

SELECT TECHNIQUES THAT PERMIT BEHAVIORAL OBSERVATION AS WELL AS THE COLLECTION OF OTHER DATA.

WHEN POSSIBLE, USE ASSESSMENT DEVICES THAT PRODUCE MULTIPLE DATA.

USE GROUP ADMINISTERED TESTS AND WORK SAMPLES WHEN POSSIBLE.

USE AUDIOVISUAL OCCUPATIONAL INFORMATION MATERIALS WHEN POSSIBLE.

III. Vocational Evaluation Planning - A Case Study

The purpose of this section is to use the general principles given earlier to plan a one week evaluation using an industrially disabled worker as an example. This example will assume that the evaluation unit is capable of assessing persons with a wide variety of disabilities. It will also assume that the evaluation unit has available the most commonly used psychological tests, commercial work samples, and "homemade" work samples from the MDC Work Sample Manual Clearinghouse.

Step 1 - Initial Review of Case - Following a call from Mr. John C. Nelson, a state vocational rehabilitation counselor, you receive a Vocational Evaluation Referral form with attached information on the client's personal, educational, and employment histories as well as copies of the more important medical reports (see Appendix B). After a careful review of these records, you begin to prepare a mental picture of the most important characteristics of the client and what the vocational implications of these characteristics might be. Because these vocational implications are only preliminary assumptions based on your experience with other similar clients, they should be verified and revised as new information is obtained. You decide that the possible implications for the client's characteristics are as follows:

Characteristic	Possible Vocational Implication
- 42 year old married male, owns house, spouse employed. Two school aged children.	Willing to relocate? Try to place or train for job in local economy.
- Completed 11th grade; no vocational training beyond high school.	Need to assess literacy skills, especially if vocational training is an option.
- Two lower back surgeries; pain in lower back at present.	Restricted to light or sedentary work; alternate between sitting and standing.
- Possible chemical dependency/ alcohol problem. - Irritable, restless nature.	If a serious addiction, will he need inpatient treatment? What behaviors would interfer with successful employment?

Because it is important in assessing transferable skills, aptitudes, and possibly interests, the employment history is treated separately. The job descriptions given by the referring counselor are compared to Dictionary of Occupational Titles job descriptions and the closest titles selected. The DOT job description is used to select specific tasks (or skills) that may be transferable to other areas. Data on specific vocational preparation (SVP), aptitude requirements, and physical demands can be found by using either: Classification of Jobs According to Worker Trait Factors (Field & Field, 1980) or The Encyclopedia of Job Requirements (McCroskey & Perkins, 1980). Information on the most significant aspects of Mr. Andersen's work history are noted below. Of particular importance are the tasks (or skills) that may be transferable to other areas and the significant aptitudes that were required for acceptable job performance. The Initial Job History Form (page 20) was

Initial Job History Form

Client Name Andersen, Ralph J. Evaluator T. J. Schultz Date 12/3/82

DOT Title, Code & Dates	Transferable Skills/Tasks	Significant Aptitudes	Physical Demands	SVP
Farm Worker, General (agric.) I 421.683-010 1957-1960	Machinery operation, animal care, perform minor mechanical repairs; perform routine maintenance on equipment	Motor coordination; finger and manual dexterity	Heavy; climbing, stooping, reaching, seeing	6 mo. to 1 yr.
Logger, All-Round (logging) 454.684-018 1957-1960	Operation and maintenance of chain saw; operation of truck and loader	Motor coordination, manual dexterity	Same as farm worker	6 mo. to 1 yr.
Track Repairer (r.r. trans.) 910.682-010 1961-1965	Operation of special machinery, sign painting, operation of spray equipment	Spatial perception, motor coordination, manual dexterity	Heavy; stooping, reaching, seeing	3 to 6 mos.
Tank Truck Driver (whole. trade) 903.683-018 1965-1980	Operation and control of pumps and valves; ability to read gauges; operation of motor vehicle	Spatial perception, finger dexterity manual dexterity, eye-hand-foot coordination Note: All four jobs require average level of general learning ability.	Medium; stooping, reaching	1 to 3 mos.

Figure 1

designed to organize this information. You place the data for the former jobs that the client has held on this form.

By the time you finish the Initial Job History Form (Figure 1), you are beginning to form some understanding of the client as a total person and how you plan to approach his evaluation. The next step is the referral questions.

Step 2 - Referral Questions - On the front of the Vocational Evaluation Referral, you find three referral "questions":

1. Explore job opportunities
2. Assess client to provide direct placement
3. Check out personality problems.

Here you stop. These three referral questions are much too general to be answered within a week. After rereading the vocational referral and reviewing your notes, you begin to formulate specific referral questions. When these are completed you telephone the counselor and go over the questions with him. He has a few suggestions and both of you agree on the referral questions:

1. What job opportunities offering a good chance for direct placement exist within a driving distance (30 miles) of the client's home?

2. Is the client interested in these occupations?

3. Does the client have the physical capacities and the range of motion to perform sedentary or light work for eight hours per day?

4. Does the client have the aptitudes and skills to perform routine, semiskilled industrial occupations?

5. What is the degree of drug and alcohol abuse, if any?

6. Does the client have any behaviors which would present potential employment problems?

7. In the event that formal training is a future option, assess academic achievement levels.

Step 3 - Selection of Evaluation Techniques - You now have the referral questions and at least some ideas about the client. The next step is to select the appropriate techniques to answer these questions. This is the single most important phase of evaluation planning and must be done carefully. It requires considerable insight and a large degree of experience in knowing what each particular assessment device can and cannot do. Here you use a decision making process for each separate assessment technique that you consider using.

You first decide if the assessment device is related to the referral question:

- Does the purpose of the assessment technique match the intent of the referral question?

- Does the test, work sample, etc., measure what it purports to measure and how does this relate to the referral question?

- Does the instrument yield reliable data?

In order to answer these questions, you must know the reliability, validity, and norms for each instrument that you choose to use. This means that you need to be thoroughly familiar with each assessment technique in your evaluation unit prior to choosing it for use with a client.

The second decision point is simply:

- Does the client have the literacy skills required to take a particular device?

Here you must know and be able to compare two factors: (1) The required reading level of each device, if any, and (2) the client's literacy skills. Reading levels for psychological tests are almost always found in their manuals and reading levels for work samples can be estimated if not contained in their manuals. The client's literacy level can be estimated by his/her educational level, age, employment history, and previous tests. If you are not sure about reading or mathematical skills, you should schedule a short literacy test as the first step of the evaluation. These results are needed to plan the selection of tests and work samples.

Third, you must ask:

- Does the client have the physical capacities required to perform on a particular device?

Here you are walking a thin line between "definite no's" and "possible no's." "Definite no's" are based on medical recommendations and common sense. If the orthopedic surgeon says "no bending" you are not going to assign a client to a materials handler job sample. The "possible no's" involve trying to establish physical capacities without injuring or causing unnecessary pain or fatigue. If a client can only sit for 30 minutes, you can assign him/her to a task that requires sitting for a longer period, assuming you inform him that he can get up to move around if necessary. The same is true with a standing or reaching task. As a professional, you realize that there are no rules to follow here; you must use your judgment when planning, then be observant during administration of any device, and finally be willing to change the evaluation plan as necessary.

Finally, you ask:

- Does the client have the sensory skills necessary to perform on a particular device?

The final step in selection of a particular assessment tool for a particular client to answer a specific referral question is simply "Does the client have the capabilities to perceive the test, work sample, etc., content?" This usually means does the client have the visual and hearing perception to understand the instructions and the actual content of the device (see Dickson,

1976, and Botterbusch, 1976, for ways of modifying tests and work samples for visually and/or hearing impaired clients).

You use this informal decision making process to select appropriate assessment techniques for each referral question. The results are written on the Individual Evaluation Plan form* (Figure 2). You complete the identification material and write the first referral question:

I. What job opportunities offering a good chance for direct placement exist within driving distance (30 miles) of the client's home?

#1 Teach Use of Occupational Information System - The first assessment technique is to teach the client how to use the occupational information system so that he can freely search for job opportunities. He is taught how to use the classification system, where the print files are and how to use audiovisual materials. You get him started and then check back once or twice. (Date & Time - 12/6/82; 2:45 - 3:30 P.M.)

#2 Review Occupational Information System Findings - The next day Mr. Andersen is to continue to search for jobs in the manner described above. You will make sure that he has gotten started Tuesday morning and then spend about 30 minutes with him going over the results. (Date & Time - 12/7/82; 9:00 - 10:30 A.M.)

#3 Meet with Placement Specialist - At the end of the week you schedule an appointment with the placement specialist to discuss opportunities for direct placement. By this time the client will have been exposed to a wide variety of experiences and should have a good subjective estimation of his capabilities and limitations. Prior to this meeting, you will give the placement specialist your own initial findings. (Date & Time - 12/10/82; 8:30 - 9:00 A.M.)

II. Is the client interested in these occupations?

- Assessments #2 and #3 above relate to interests as much as they do to occupational information.

#4 Minnesota Importance Questionnaire - The MIQ (Weiss, et al., 1975) will help to identify personal need areas and relate these to jobs that can fill these needs. In addition to providing data on this referral question, the MIQ may relate to question IV, behaviors that would cause employment problems. You arrange for a co-worker to give the MIQ at one sitting to all clients who are scheduled to take it that week. (Date & Time - 12/9/82; 11:00 - 11:30 A.M.)

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*This form is taken from Paul McCray, The Individual Evaluation Plan, Menomonie, Wisconsin: Materials Development Center, 1978. This publication contains a detailed discussion on evaluation planning; the steps used in this publication are modified from the McCray publication.

INDIVIDUAL EVALUATION PLAN

Client: Ralph J. Andersen Evaluator: T. J. Schultz Evaluation Period: Beginning: 12/6/82 Ending: 12/10/82

Review Dates: _____ Asterisk (*) denotes a plan modification.

Referral Questions to be Answered	Assessment Techniques	Administration Dates and Times	Persons Involved
I. What job opportunities offering a good chance for direct placement exist within driving distance (30 miles) of the client's home?	#1 Teach client to use occupational information system	12/6/82 2:45-3:30 PM	
	#2 Go over findings with client on information system	12/7/82 9:00-10:30 AM	
	#3 Meet with placement specialist to discuss direct placement	12/10/82 8:30-9:00 AM	M. F. Jones
II. Is the client interested in these occupations?	- See #2 and #3 above		
	#4 Minnesota Importance Questionnaire	12/9/82 11:00-11:30 AM	
	#5 Wide Range Interest-Opinion Test	12/8/82 2:30-3:30 PM	K. R. Allen
III. Does the client have the physical capacities and range of motion to perform sedentary or light work for eight hours per day?	#6 Upper Extremity Range of Motion	12/8/82 9:00-9:30 AM	
	#7 Whole Body Range of Motion	12/8/82 1:00-1:45 PM	
	#8 Stout U-Bolt Assembly Work Sample	12/7/82 1:00-3:30 PM	
	#9 Dahl-Holmes Small Engine Work Sample	12/9/82 9:00-11:00 AM	
	#10 Behavioral Observation for Signs of Pain	Ongoing - 3 minutes each half hour	

Figure 2

Client: Ralph J. Andersen

Referral Questions to be Answered	Assessment Techniques	Administration Dates and Times	Persons Involved
IV. Does the client have the aptitudes and skills to perform routine, semiskilled industrial operations?	#11 General Aptitude Test Battery	12/6/82 11:15-12:00 PM 1:00-2:30 PM	J. M. Sunding
	- See #8 and #9 above		
	#12 Revised Tomcheck/Brown Eye-Hand-Foot Coordination Work Sample	12/7/82 10:45-12:00 PM	
	#13 Electronics Assembly	12/8/82 9:45-12:00 PM	
V. What is the degree of drug and alcohol abuse, if any?	#14 Assessment for Alcohol and Drug Abuse	12/8/82 1:00-2:00 PM	T. S. Dunn
VI. Does the client have any behaviors which will present potential employment problems?	- See #13 above		
	#15 Intake Interview	12/6/82 9:30-10:30 AM	
	#16 Integrated Peer Performance Work Sample	12/9/82 2:00-3:30 PM	M. F. Jones
	#17 Behavioral Observation	Ongoing	
VII. In the event that formal training is a future option, assess academic achievement levels.	#18 Wide Range Achievement Test	12/6/82 10:30-11:00 AM	J. M. Sunding
	- See #10 above		

We, the undersigned, understand our roles in carrying out this plan.

Evaluator Signature: _____ Date: _____
Client Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____
Signature: _____ Date: _____

Figure 2 (con't.)

#5 Wide Range Interest Opinion Test - You want to make certain that you are not overlooking any interest areas that were not discovered through other means, so you select this general interest inventory (Jastak and Jastak, 1972) designed to cover the entire world of work. This test is untimed and almost self-administering, so you only need to get Mr. Andersen started. (Date & Time - 12/8/82; 2:30 - 3:30 P.M.)

III. Does the client have the physical capacities and the range of motion to perform sedentary or light work for eight hours per day?

Here you encounter two problems. The first is the range of motion, which can be rather easily assessed directly by using two work samples - Valpar #4 (Upper Extremity Range of Motion) and #9 (Whole Range of Motion) (Valpar Corp., 1974a; 1974b). You also can assess capacities for sitting, standing, bending, and reaching as well as general work endurance. You plan to use work samples that require fairly lengthy periods of sitting and standing. One work sample also measures repeated reaching and another bending to a degree. You realize that the best way to evaluate endurance is through careful behavior observation during the entire week. Keeping all of this in mind, you plan to use the following devices:

#6 Upper Extremity Range of Motion - This Valpar (1974c) work sample is designed to evaluate the client's subjective complaints of pain and fatigue in the shoulder, arm, elbow, wrist, and hand. It is administered in about 30 minutes and will require your careful observation throughout that time period. (Date & Time - 12/8/82; 9:00 - 9:30 A.M.)

#7 Whole Body Range of Motion - This Valpar (1974d) work sample assesses the client's ability to bend, reach overhead, grasp, and crouch. It measures subjective complaints of pain and fatigue for the mid-back, lower back, hips, knees, ankles, feet, shoulders, elbows, wrists, and fingers. It takes about 45 minutes to administer and requires careful observation during that time. Before you administer either of these two range of motion work samples, you check the client's medical records for any restrictions. (Date & Time - 12/8/82; 1:00 - 1:45 P.M.)

#8 Stout U-Bolt Assembly Work Sample - This routine assembly task (Botterbusch, 1974) is used by you to measure manual, bimanual and finger dexterity. Because it is administered to a seated client and takes from two to three hours, it measures sitting tolerance. Constant reaching within about 18 inches of the body is also required. It can also be used to measure tolerance for repetitive work.

#9 Dahl-Holmes Small Engine Work Sample - The major task in this work sample is the disassembly and assembly of a small gasoline engine (Dahl & Holmes, 1974). You select this work sample because it requires the client to stand for about two hours as well as reaching and some lifting from table level. Besides these physical capacities, the task assesses skill with hand tools, spatial perception, manual dexterity, and eye-hand coordination. (Date & Time - 12/9/82; 9:00 - 11:00 A.M.)

#10 Behavioral Observation - The four devices listed above for assessing physical capacities are all limited to fairly short periods of time. You need to be able to estimate the client's endurance for full time work. In order to accomplish this, you must rely on behavioral observations of the client during the evaluation period. You decide on a point-sampling approach in which you will observe him for three minutes every 30 minutes. During these times you will watch for: (1) signs of fatigue, (2) unusual positions, (3) shifting weight while sitting, (4) frequency of alternations between standing and sitting, (5) posture when walking, and (6) verbal remarks or complaints of pain and fatigue to you, other staff or clients.

IV. Does the client have the aptitudes and skills to perform routine, semi-skilled industrial operations?

With this question you become concerned with accurate assessment of perceptual and dexterity aptitudes as well as specific skills with tools. Based on the analysis of the client's job history, you suspect that he has adequate gross coordination and manual dexterity. You will assess for these, of course, but your emphasis will be on fine dexterity and the perceptional aptitudes. You select the following devices; fortunately, two of these serve the dual purpose of assessing physical capacities:

- Assessments #8 (Stout U-Bolt Assembly Work Sample) and #9 (Dahl-Holmes Small Engine Work Sample), listed above, will provide assessments of finger, manual, and bimanual dexterity, spatial perception, and the use of hand tools.

#11 General Aptitude Test Battery - This widely used multi-aptitude battery is selected because it can give an accurate estimate of nine work related aptitudes in about two and one-half hours. Test results can be matched directly with specific groups of jobs called Occupational Aptitude Patterns (U.S. Employment Service, 1970; 1980a, 1980b). The GATB aptitudes needed to answer this referral question are: S - spatial perception, P - form perception, Q - clerical perception, K - motor coordination, F - finger dexterity, and M - manual dexterity. The GATB is administered to a group of clients on Monday morning by each evaluator on a rotating basis. (Date & Times - 12/6/82; 11:15 - 12:00 P.M., 1:00 - 2:30 P.M.)

#12 Revised Tomcheck/Brown Eye-Hand-Foot Coordination Work Sample - You select this task because it assesses coordination of the eyes, hands, and feet; this is a common requirement of bench assembly and machine trades jobs (Banks, 1974). You are also interested in seeing if the client can perform the task with work rhythm. (Date & Time - 12/7/82; 10:45 - 12:00 P.M.)

#13 Electronics Assembly - This work sample is one of the Singer Vocational Evaluation System units (Gannaway, Becket & Weiner, 1979). You select this because it will measure fine finger dexterity, ability to follow directions, and ability to work within close tolerances.

Because this work sample also relates to specific placement possibilities in electronics, electrical, and other bench assembly occupational areas, it can also be used for occupational exploration. (Date & Time - 12/8/82; 9:45 - 12:00 P.M.)

V. What is the degree of drug and alcohol abuse, if any?

It is critical to determine the degree of this problem before any definite plans are made for direct placement or training. Here you are concerned about two questions: (1) Is the client's problem severe enough to meet in-patient treatment and (2) Would some of the problem behaviors be reduced or eliminated if this chemical dependency problem were controlled? However, you do not feel qualified to handle this assessment, so you contact a counselor friend at the County Alcohol and Drug Abuse Association and arrange for her to make an assessment.

#14 Assessment for Alcohol and Drug Abuse - The chemical dependency counselor will determine if the client meets the medical definitions of alcoholism and drug dependency. If so, then this must be treated prior to placement. She will also report her impressions on how the problem relates to the client's behaviors. This will be given to you in the form of a short written report prior to staffing. (Date & Time - 12/8/82; 1:00 - 2:00 P.M.)

VI. Does the client have any behaviors which would present potential employment problems?

The referral information mentioned "irritable, restless nature" which leaves you with many questions about his behavior. You assume from the job history that he knows and has used proper work habits and behaviors in the past. The question, then, centers on present behaviors and not on lack of knowledge. You are concerned about several major areas: (1) relationship to authority, (2) response to closer supervision than he encountered as a trucker, (3) ability to work closely with co-workers, and (4) determination of flexibility in new situations. While not strictly behavioral in nature, you are also interested in his ability to accept his physical limitations and to take an active role in planning for his future. With these concerns in mind, you arrange for the following techniques:

- Assessment #14, the evaluation by the chemical dependency counselor will provide data on behaviors in a threatening situation with an authority figure.

#15 Intake Interview - This will provide you with direct experience in how he copes with authority and how responsible he appears to participate in future plans. You will also assess his flexibility.

#16 Integrated Per Performance Work Sample - This Valpar work sample is designed to assess assembly skills, to assess behaviors between clients as co-workers, and to assess behaviors with an inspector, an authority figure. Because you have already assessed the client's

dexterity skills, you are mainly using this work sample to measure behaviors with co-workers and with authority figures. This work sample provides a structured setting for these behavioral observations. As an additional variable, you arrange for another evaluator to administer this task to five clients at a time. You use this time to get some of the endless paper work done. (Date & Time - 12/10/82; 2:00 - 3:30 P.M.)

#17 Behavioral Observation - This you will use as the major method of assessing the client's work behavior. You will have numerous opportunities to interact with him throughout the week and to watch his interaction with staff and with other clients. Some of the critical times for observations will be when: (1) giving the instructions for tests and work samples, (2) correcting mistakes during the practice phase of work samples, (3) giving feedback to test and work sample results, (4) interaction with other clients during breaks, and (5) any casual conversations with you or other staff. You will also use the observations of the placement specialist on December 10, 1982 at 8:30 - 9:00 A.M.

VII. In the event that formal training is a future option, assess academic achievement levels.

If Mr. Andersen cannot find employment in a job that is within his present limitations, then the vocational rehabilitaltion counselor wants you to provide data for this contingency. The basic question now becomes how to determine the client's literacy skills and his general intellectual level of functioning. While you expect that these are somewhat related, you still want to make certain. Fortunately, assessment of these variables can be quickly performed with group psychological tests. As a general policy, your evaluation unit administers the WRAT to most clients to determine mostly reading skills. These results are used to help plan the type of instruction required to communicate with the client (see McCray, 1979). The following two instruments are used:

#18 Wide Range Achievement Test - The WRAT assesses reading, spelling, and arithmetic skills within about 30 minutes (Jastak, Jastak & Bijow, 1976). Results are given in grade equivalents and in percentiles. You will compare the results with the reading and mathematic levels required by adult vocational-technical schools. This regularly scheduled group test will be given to several clients on Monday morning. (Date & Time - 12/8/82; 10:30 - 11:00 A.M.)

#19 General Aptitude Test Battery - The GATB has already been scheduled to help answer referral question #4 on aptitudes and skills. Referral question #7 is primarily concerned with three aptitudes that are related to academic skills: G - general learning ability, V - verbal, and N - numerical. (Date & Times - 12/6/82; 11:15 - 12:00 P.M., 1:00 - 2:30 P.M.)

You have tentatively planned the entire evaluation week for Mr. Andersen. He is in the evaluation unit Monday through Thursday from 9:00 A.M. to 12:00

noon and from 1:00 to 3:30 P.M. On Friday he is there from 8:30 to 9:00 A.M. After that time you have to organize data on him and three other clients to have it ready for a series of 30 minute staffings scheduled for Friday afternoon. You now must wait to see Mr. Andersen during the intake interview.

Step 4 - Initial Intake Interview - The next step is the intake interview which is scheduled for one hour on Monday morning. You first review the referral information to determine if you need to know more about any specific aspect of Mr. Andersen's case. You decide that there are numerous holes in the referral information, so you plan to ask the client questions about his personal, educational, employment, and medical history that are not covered in the vocational evaluation referral or in the medical reports. You plan to collect the data as outlined on the Initial Interview Information Form given in Appendix A. (The information on this form can be used to prepare much of the evaluation report, especially sections dealing with personal education, employment, and medical history.)

In addition to the questions on the form, you need to ask:

1. If specific vocational training was found to be necessary, could present family income support your family for one year? For two years?

2. If you could not find a job in this area, would you be willing to relocate or would you prefer to get training that would make you employable within this area.

The clients arrive at 9:00 A.M. on Monday and after a brief introduction to the facility, an explanation of the purpose of evaluation and a short question-and-answer session, you begin the initial intake interview at 9:30 A.M. Using the Initial Interview Information Form (Appendix A), you ask all the questions not covered in the referral information. You spend some time on the questions on vocational training and relocation, finding out that while Mr. Andersen would prefer a direct placement, he would consider training only if a good paying job was not immediately available. He would not consider relocation under any circumstances.

His job history is reviewed and you find out that he held a part-time job for about two years as a gasoline station attendant. Because this was 15 years ago, you decide it is irrelevant and omit it from any future consideration. When asked about direct placement, Mr. Andersen states that he would like an inside job with good pay, but beyond that he really doesn't know. He would try production or maintenance work if it were within his physical limitations, which he sees as being permanent and severe.

At this point you show him the referral questions and the individual evaluation plan. He likes the idea of finding out more about available jobs and what he can do, even though he does not think he can do much of anything. He becomes defensive when seeing the questions on behaviors and substance abuse. You tell him that he probably knows how to survive on a job, but that his doctors and V.R. Counselor have noted problems with being restless, short tempered, and in general not being easy to communicate with. He gets angry and then finally agrees that because of his back pain he has been touchy

lately. You approach the referral question on substance abuse and he grows increasingly hostile and defensive, especially at the notion of an assessment by a chemical dependency counselor. He says he needs a job and once he gets one he will cut back. You say he may not be able to keep a job and if he could he would find another excuse to drink. You end the argument by telling him he will talk with the drug counselor.

You explain that this plan is a written agreement on how he will spend his week at the evaluation unit and, more important, what questions you must answer so that his vocational future can be determined. He leaves the interview to take the WRAT.

Step 5 - Plan Modification - As Mr. Andersen leaves, you realize that you most likely will be able to complete the evaluation period without making major changes in his evaluation plan. While Step 5 is often necessary, you really try to avoid it by concentrating your efforts on a careful review of the case and developing accurate referral questions prior to even seeing the client. However, you realize that there are times when you must modify the plan prior to the start of evaluation:

- The client's literacy skills are too low for the tests, work samples and occupational information you have selected.
- The client had a definite interest that was not stated until the initial interview.
- The client's physical condition was not accurately reported and you had to change techniques to accommodate this.
- The client has behavioral problems that require exploration.

Even after the evaluation period has started, you realize that there are times when the plans must be changed because of: the realization of a newly found interest, the presence of a new source of occupational information, the change in a significant behavior, or the need to explore one aptitude or skill in depth. If you make any changes in the evaluation plan, you are certain to record these and give the reasons why.

As a professional you realize that the client's individual evaluation plan is the client's plan and may be changed if new data raises unexpected problems.

Step 6 - Exit Interview - On Friday morning you plan to see Mr. Andersen for the exit interview. You present your results to him in an informal manner and tell where you see him going from here. Mostly, however, you just listen to what he has to say and how he sees his future. He is somewhat more competent about his abilities and feels that he can get a job locally with the help of a placement specialist. He is extremely upset about the behaviors and the results of the session with the chemical dependency counselor. You tell him briefly what your final recommendations will be at the staffing and invite him to attend his own staffing. As he leaves you make a few final notes and place the Initial Interview Information Form, the Individual Evaluation Plan, behavior observation form, and results of tests and work samples in his folder; these will be the basis of your report. Your next client is waiting outside.

Summary - This section used a case history approach as a method of illustrating six basic steps in evaluation planning: initial review of case, preparation of referral questions, selection of evaluation techniques, initial intake interview, plan modification and exit interview. These steps have been outlined on the Flow Chart (Figure 3) on pages 33-37. This summary chart can be detached from this publication and used as a guide to decision making. The point of this exercise is that as an evaluator you can plan a solid one week evaluation of clients by using careful preliminary planning, specific referral questions, and a variety of established techniques.

The next part of this monograph will examine three, one week evaluation programs in depth.

Model in Planning for a One Week Vocational Evaluation

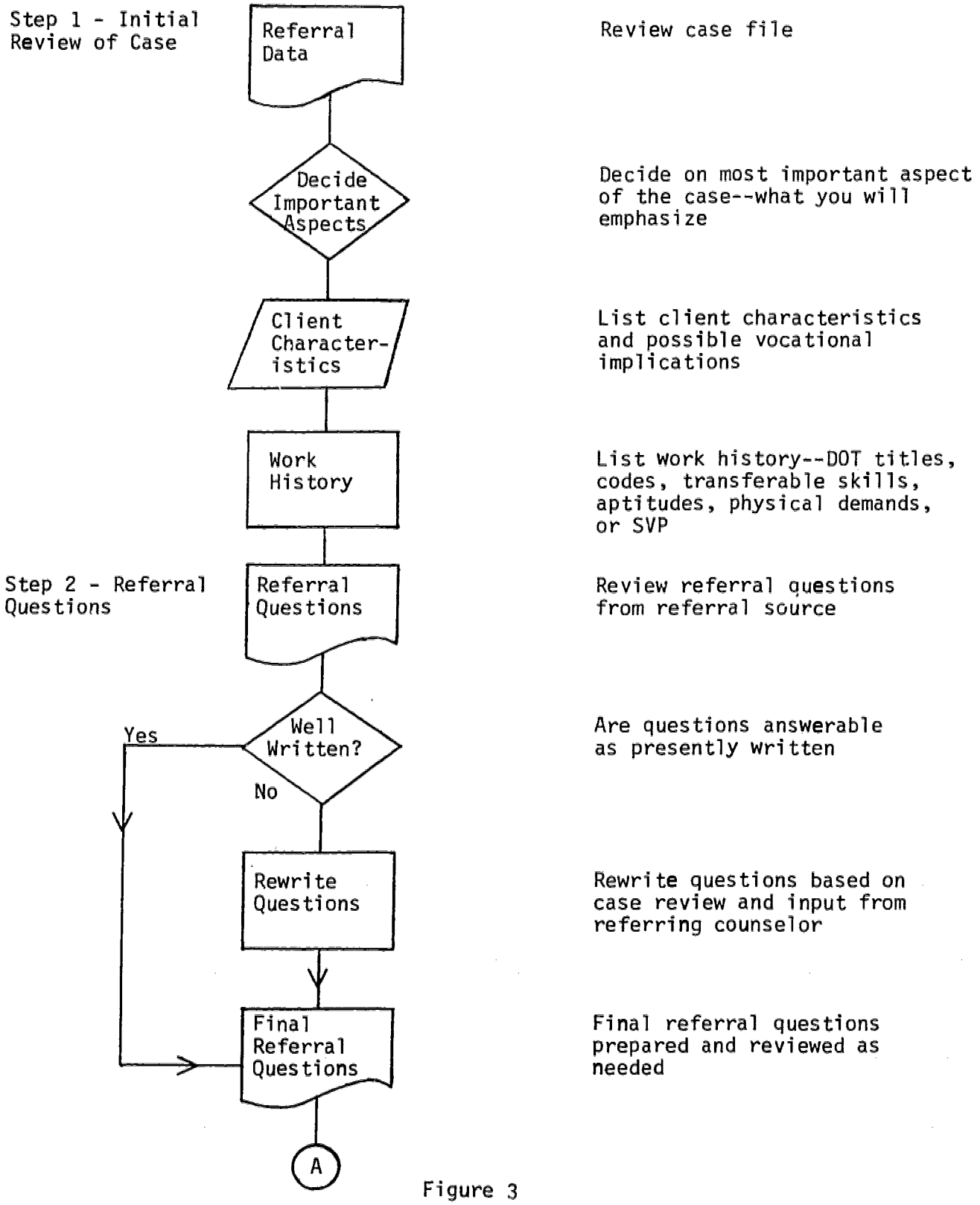
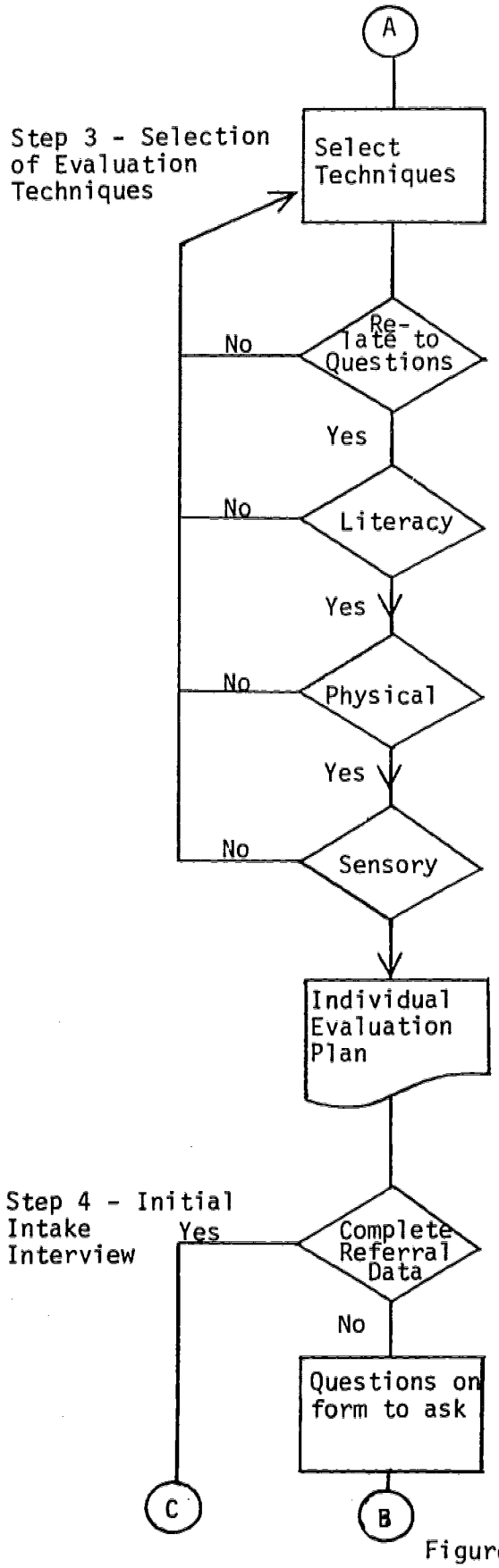


Figure 3



For each referral question select appropriate technique.
For each technique some decisions are:

Do results of this specific technique relate to the referral question asked?

Does client have the literacy skills required?

Does client have the physical capacities required?

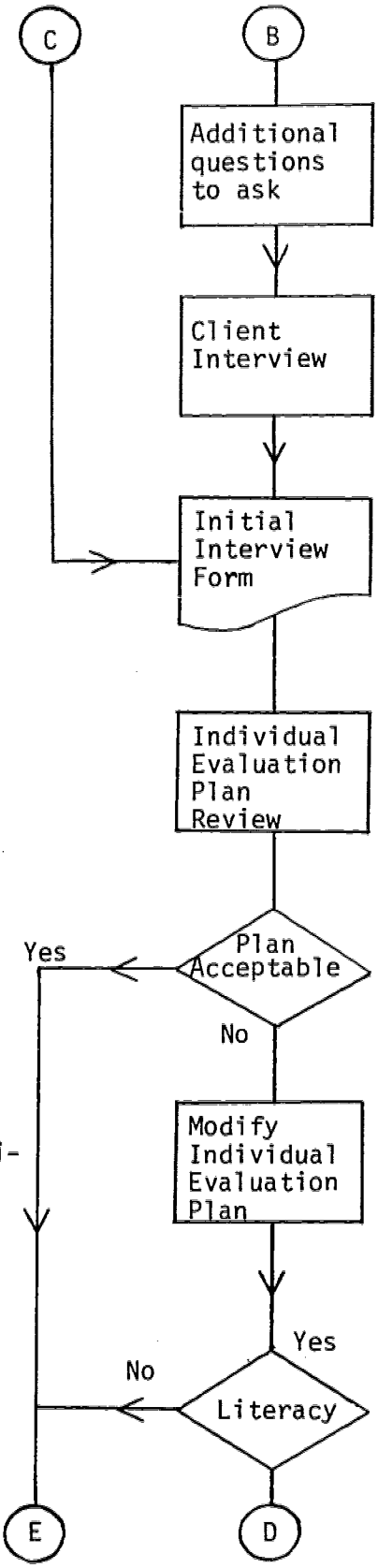
Does client have the sensory skills required?

Completion of Individual Evaluation Plan form listing specific technique(s) for each referral question

Is referral information complete?

What questions must be asked to complete the Initial Interview form?

Figure 3 (cont.)



Step 5: Plan Modification

What questions not on the Initial Interview form must be asked client?

Interview client to answer necessary questions on personal, educational, employment, medical history and present activities

Complete all relevant information on Initial Interview Form

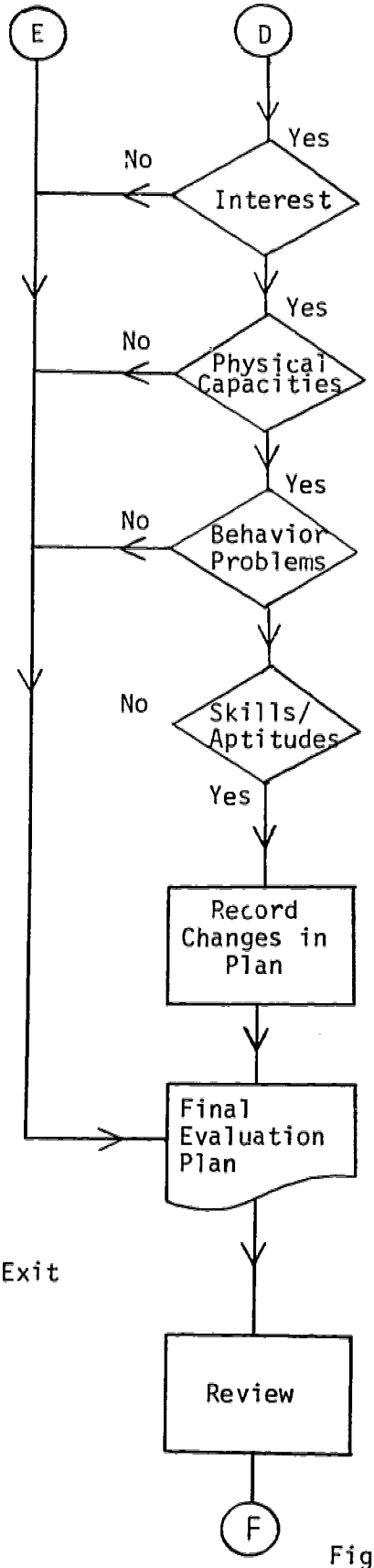
Review Individual Evaluation Plan with client

Is plan acceptable to both you and client?

Modify Individual Evaluation Plan as necessary. Base changes on new data obtained during initial interview or during evaluation process. Referral questions and specific techniques are changed according to:

Misestimate of client's literacy skills?

Figure 3 (cont.)



Discovery of definite new interest area?

Changes in estimated physical capacities?

Appearance of unexpected behavioral problems?

Need for in-depth assessment of a specific aptitude or skill?

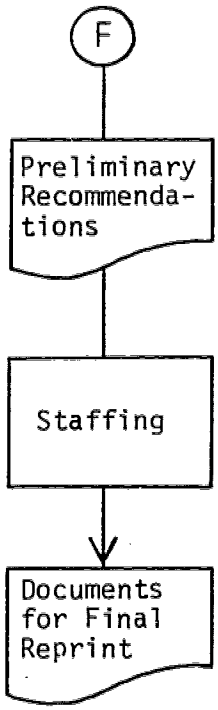
Record changes and give reasons

Revised and completed final evaluation plan

Step 6 - Exit Interview

Review results of evaluation with client

Figure 3 (cont.)



Show client preliminary recommendations and discuss staffing

Discussion of case with staff, client, etc. Final recommendations are made

Gather all documents for report preparation - Initial Interview form, evaluation plan, behavior observation, test and work sample results

Figure 3 (cont.)

IV. Model Programs

This section contains examples of three vocational evaluation units that have successful one week vocational evaluation programs. These programs were selected because each occurs in a different setting: a vocational rehabilitation facility, a rehabilitation hospital, and a freestanding evaluation unit. When reading these descriptions and when comparing the programs of each, the reader should remember that while there are major differences in the methods and philosophy, each program stresses careful planning and thorough reporting.

The Mankato Rehabilitation Center, Inc. - Hamlet Project

The Mankato Rehabilitation Center, Inc. (MRCI) is a private nonprofit agency providing a wide range of transitional and long-term programs. The Center is located in Mankato, Minnesota, 80 miles southeast of the Minneapolis/St. Paul Metropolitan area and has satelite facilities in the southern Minnesota communities of Fairmont and New Ulm. Each year MRCI serves over 1,000 disabled people in the following programs: Vocational/Work Evaluation, Work Adjustment Training, Extended Sheltered Employment, Work Activity, Food Service and Janitorial Skill Training, Pre-school and Adult Developmental Achievement Center, Job Placement, and Speech Therapy.

MRCI has two vocational evaluation units. The original evaluation unit is more of a "traditional" program in design, encompassing a very wide variety of evaluation techniques, tools, machines, and work environments. The population traditionally served by MRCI generally has had little work experience, has behavioral and/or other personal problems significantly impacting on vocational development and/or employment, often has limited independent living skills, and usually requires the intense social and personal adjustment services offered by the MRCI staff. This traditional evaluation is typically two to four weeks in length.

As the population utilizing MRCI became more diverse, including an increased number of industrially injured persons, the desirability for an alternative evaluation model emerged. Referrals to MRCI included a great number of people with the following significant characteristics: substantial past work histories, capacity to perform at satisfactory levels on psychometric tests and short-term work samples and relative freedom from multiple handicaps which greatly complicate assessment. The Hamlet Evaluation Unit began in the Fall of 1981 with a program designed to offer a comprehensive evaluation of vocational factors with a conservative expenditure of both time and resources. The approach includes a maximum use of an individual's vocational history and life experience to identify transferrable skills, physical capacity (within the confines of a shorter evaluation), aptitudes and interests. The McCroskey Vocational Quotient System is used as a means of snythesizing and analyzing data on which the client builds a profile of their abilities and interests. Gaps in vocational factors information persisting after an initial analysis of the client's background are filled through aptitude and interest assessment using tests, inventories and specially selected work samples. This profile can then be compared with the job requirements of the 12,099 occupations recognized in the Department of Labor's Dictionary of Occupational Titles utilizing the Encyclopedia of Job Requirements (McCroskey, 1981).

The evaluation is five days in length with the bulk of the assessment process being completed in four days or less. The fifth day is reserved for an exit conference with the client and referring counselor.

The program is not intended to substitute for the more extensive vocational evaluation mentioned above; it is intended for persons who generally have had work experience and are primarily in need of defining their current vocational abilities which may have changed as the result of the occurrence of a disability. The appropriateness of the Hamlet Evaluation for each client

is determined by the referring counselor, the client, and project staff who are familiar with both evaluation models.

The evaluation process involves the client as much as is possible. The client is instructed on use of the Dictionary of Occupational Titles, Guide to Occupational Exploration, Occupational Outlook Handbook and various other vocational exploration materials. The client is also instructed in the use of various aspects of the McCroskey Vocational Quotient System. In effect, with guidance and direction from the staff, each client builds his/her own vocational profile. During the development of the project, the assumption was that by allowing the client sufficient insight into the process, he/she will complete evaluation with a thorough understanding of the conclusions and recommendations resultant from the evaluation. In fact, informal yet routine feedback from clients completing the process indicates that they are indeed leaving with a better understanding of themselves vocationally. Clients also frequently express satisfaction with the extent to which they were involved in their own evaluation and search for viable vocational alternatives.

The Evaluation Process -

An initial intake interview with the client is the first step in the evaluation process and usually occurs two weeks prior to the client entering the program. Obtaining a detailed work history from the client is a primary objective of the interview; however, equally important is a brief explanation of the program for the client, an overall review of the client's current situation from his/her perspective and identification of any barriers which may interfere with attending the evaluation (transportation and housing).

On the first day of the evaluation, the client is assisted in using the vocational exploration materials to identify interests and options. Standardized vocational interest tests and inventories may or may not be used to supplement and guide this search. The clients are not restricted to which jobs they select, but they are guided in choosing jobs which are represented in the local job market. Clients are asked to identify up to ten jobs. Some of these jobs are obtainable as short-term goals; others are jobs which are long-term goals.

Group techniques are emphasized during the evaluation. Three to five clients are evaluated during the same week. Interaction during vocational exploration is encouraged as clients assist each other in utilizing the vocational exploration material and identifying possible job alternatives. Similarly, group testing is used as much as possible in that it is more efficient. Immediate feedback is given to each individual where possible as to the results of his/her tests.

Test results and their implications for vocational decision making are interpreted to the clients in a manner intended to assure their understanding of how the test and its results apply to their occupational choices. The client is assisted in developing graphs which depict their relative performance and assist them in seeing how their performance compares to norm groups. Clients also are asked to do a self-rating of their physical capacities and environmental conditions. The evaluator makes behavior observations throughout the evaluation time.

Once all evaluation data has been compiled, interpreted to the client, and entered into the profile, the work evaluator and the client develop a final, adjusted profile based on evaluation information and referral information. The client then compares his/her initial occupational choices with the adjusted final profile, eliminating choices that are unrealistic due to difficulty levels, physical demands, etc. The evaluation progresses at this point with additional vocational exploration, using the Encyclopedia of Job Requirements and the other vocational exploration data to identify realistic potential occupational choices. A significant amount of vocational guidance and counseling is available throughout the process as it is especially important at this stage. Although the client is expected to make specific job choices at this time, exploration need not end when the evaluation is completed. Further exploration either at the Hamlet project or with the referring counselor is possible.

On the final day of evaluation a planning conference is held with the client, counselor, evaluator, and/or other appropriate persons. The intent is to review the evaluation information and to identify appropriate goals and steps in the client's subsequent rehabilitation plan.

A "diary" of the process follows to assist the reader in understanding the program flow.

MONDAY, 8:30 A.M. to 10:00 A.M.

Orientation, introduction of vocational exploration materials. At this point the evaluator will spend time with the client verifying work history and assisting the client in profiling past jobs on the data sheet.

10:00 A.M. to 11:30 A.M. (following a break)

Initial list of job choices is developed using the DOT, GOE, OOH, etc.

12:15 P.M. to 3:00 P.M. (following lunch)

Paper/pencil testing.

TUESDAY, 8:30 A.M. to 11:30 A.M.

Dexterity testing is initiated and completed.

12:15 P.M. to 3:00 P.M.

Any additional testing which may be left is completed. Following completion of testing the client continues listing initial job choices prioritizing and transferring choices to the McCroskey Vocational Quotient Scale (MVQS) Profile Data Sheet. At this point test results are given to the client with an explanation of the percentile rankings and the client is given time to ask questions about his/her scores and the meanings of the tests. The client is assisted in recording the test results on the graph forms and in locating his/her levels of performance. Client transfers aptitude levels to the MVQS Profile Data Sheet.

WEDNESDAY, 8:30 A.M. to 11:30 A.M.

Client finishes recording aptitude levels on the data sheets. He/she then completes the self-rating of physical capacities and environmental preferences. This is followed by a physical capacities interview with the client to verify the self-ratings. At this point the evaluator develops a final adjusted profile based on the client's work history, test results, physical capacities and environmental conditions rating scales. The client then compares the final adjusted profile with the trait requirements of the job choices, identifying those trait levels of his/her job choices which exceed tested levels.

12:15 P.M. to 3:00 P.M.

The client begins his/her second job search in the occupational groups and GOE groups in which the initial ten choices were found. The purpose is to identify additional job choices and/or jobs which have trait requirements within the client's demonstrated ability as shown by the adjusted profile. The client then prioritizes the final choices.

THURSDAY, 8:30 A.M. to 11:30 A.M.

The final job search is completed, profiling and prioritizing as necessary. The client is instructed to delete the jobs which significantly exceed any trait factors as compared to higher final adjusted profile. He/she is also asked to identify which jobs may be undesirable or unrealistic for other reasons such as employment outlook, availability in the desired geographic location of employment, educational/training requirements, salary expectations, etc.

At the final step of the evaluation the client is assisted in developing a rough draft resume and completing a sample job application along with an interview to determine his/her current level of job seeking skills. The process purposely begins with vocational exploration and ends with steps related to job seeking activities. As a final step to the evaluation the client is requested to write a short critique of the evaluation program. These critiques have been used by the staff in revising the program design to better meet client needs.

FRIDAY, 8:30 A.M. to 11:30 A.M.

A 45 minute to one hour planning conference is held with the client, referring counselor, evaluator and other appropriate persons. Recommendations and tentative vocational plans are established.

The final report is not seen as the final product, but is considered to be part of the whole process.

Having had over one year's experience and having provided service to over 100 individuals in this process, positive and negative aspects of the program are evident. The positive outweigh the negative. The process has, as intended, provided the clients with insights which help them to a better understanding of themselves vocationally. The process has proven to be

efficient and relatively comprehensive given the short duration of the evaluation.

Primary shortcomings of the evaluation are those things which typically justify a longer evaluation. For instance, the staff have less exposure to the client, thus, having less opportunity to form opinions especially as they relate to client attitude, etc. In addition, the process allows for physical functioning assessment based on short-term exposure to a variety of work samples and tasks. However, the client is not seen performing any single task requiring a predetermined combination of physical abilities for any extended period. Therefore, comprehensive recommendations regarding physical tolerance can best be achieved through extended evaluation processes. Recommendations regarding physical tolerances are made, qualified by the short duration of the evaluation. When further evaluation of physical tolerance is warranted, consideration is given for referral to the traditional evaluation unit.

An example of a report follows. All work sample and test results are recorded on the M.A.C.E. forms and forwarded to the referral source along with the MVQS data sheet, physical capacities forms, environmental conditions form and other appropriate supportive data.

MRCI HAMLET PROJECT-VOCATIONAL EVALUATION UNIT
REFERRAL/EVALUATION PLAN

A. INCOMING DATA REFERRAL DATE: _____

CLIENT NAME/ADDRESS/PHONE:

REFERAL SOURCE/ADDRESS/PHONE:

REASON FOR REFERRAL/SPECIFIC QUESTIONS:

DOCUMENTS/TEST SCORES INCLUDED WITH REFERRAL:

DOT JOBS OF SPECIAL INTEREST:

GOE SUBGROUP OF SPECIAL INTEREST:

DOT OCCUPATIONAL GROUPS OF SPECIAL INTEREST:

CLIENT ASSETS:

CLIENT LIMITATIONS:

B. EVALUATION PLAN (Items 1-13 are routinely provided; other items are provided as planned)

EVALUATION DATES: _____ TO _____

NEEDS	DATE PROVIDED	ITEM#	ITEM DESCRIPTION
____	_____	1	MVQS DATA SHEET (Work History Analysis; Evaluative Data Synthesis; Client Vocational Profile; Specific Job Possibilities).
____	_____	2	GOE OCCUPATIONAL INTERVIEW (Occupational interests, preferences, tolerances, specific jobs of special interest)
____	_____	3	WIDE RANGE ACHIEVEMENT TEST (Academic Achievement; School Benefits)
____	_____	4	BENNETT TEST OF MECHANICAL COMPREHENSION (Mech Comprehension)
____	_____	5	REVISED MINNESOTA PAPER FORM BOARD (Form Perception)
____	_____	6	MINNESOTA CLERICAL TEST (Clerical Perception)
____	_____	7	BENNETT HANDTOOL DEXTERITY TEST (Handtool Dexterity)
____	_____	8	MINNESOTA RATE OF MANIPULATION (Manual Dexterity)
____	_____	9	PURDUE PEGBOARD (Finger Dexterity)
____	_____	10	JVS # 20: GROMMET ASSEMBLY (Eye-hand-foot Coordination)
____	_____	11	JVS # 12: COLLATING LEATHER SAMPLES (Color/texture Discrimination)
____	_____	12	PHYSICAL CAPACITIES INTERVIEW (Strength, mobility factors, sensory factors)
____	_____	13	ENVIRONMENTAL CONDITIONS INTERVIEW (Location preference, tolerance to various job environmental situations)
			OTHER ASSESSMENTS
____	_____	14	CAREER ASSESSMENT INVENTORY (General Occupational Preferences)
____	_____	15	MINNESOTA IMPORTANCE QUESTIONNAIRE (Reinforcer Needs)
____	_____	16	JVS # 53: PAYROLL COMPUTATION (Math)
____	_____	17	JVS # 36: LOCK ASSEMBLY (Spatial Perception)
____	_____	18	JVS # 41: PROOFREADING (Clerical Perception)
____	_____	19	JVS # 52: ADDING MACHINE (Clerical Perception)
____	_____	20	TIMED TYPING SKILLS TEST (Typing speed; Clerical Perception)
____	_____	21	VALPAR # 4: UPPER EXTREMITY RANGE OF MOTION (Reaching Range)
____	_____	22	JOB SEEKING SKILLS ASSESSMENT (Filling out Applications, etc.)
____	_____	23	WORK HABITS INTERVIEW (Attendance, Punctuality, Grooming, etc)
____	_____	24	SITUATIONAL ASSESSMENT (As specified below)
			a.
			b.

Signatures: _____ (Counselor) (Date) _____ (Client) (Date) _____ (Evaluator) (Date)

Figure 4

The McCroskey Vocational Quotient Scale (MVQS) DATASHEET

SECTION 1: BACKGROUND INFORMATION

DATE:

A. Identifying Data:

Last Name	First	Middle	Social Security No.

Street	Apt. Number	Telephone

City	County	State	Zip Code

Date of Birth	Age	Referral Source/Reason for Referral

B. Education/Training

High School Graduate: Y N

GED Certificate: Y N

Circle Highest Grade Completed
1 2 3 4 5 6 7 8 9 10 11 12

Voc/Tech
1 2 3

Undergraduate
1 2 3 4

Graduate Sch.
1 2 3 4 5

Postgrad.
1 2

Name and Location of Post-Secondary Schooling	Field of Study	Length	Degree/Date

Special Skills

C. Significant Work History: Those jobs for which specific training requirements (SVP) were met followed by at least six full months on-the-job experience constitute "Significant Work History". Other work experiences should be listed at the bottom of this page under the "Other" category. List jobs in reverse chronology and describe.

1. Job title / Employer Name/Address	Specific Tasks	Mo/Yr Salary Ended: $ Began: $ Reason for Leaving
2. Job Title / Employer Name/Address	Specific Tasks	Mo/Yr Salary Ended: $ Began: $ Reason for Leaving
3. Job title / Employer Name/Address	Specific Tasks	Mo/Yr Salary Ended: $ Began: $ Reason for Leaving

Other Jobs/Experiences	Specific Tasks/Skills Acquired	Length	Salary	Why Left

MVQS DATASHEET-Revised 1981: VOCATIONOLOGY, Inc. 1525 9th Ave. S.E., St. Cloud, MN 56301

Figure 5

SECTION 3: Profiling

	D.O.T. Code	D.O.T. Title (Industry)	Length	SVP	D	P	T	R	M	L	G	V	N	S	P	Q	K	F	M	E	C
A. SIGNIFICANT	A1.1																				
WORK HISTORY	A1.2																				
1. Individual Jobs	A1.3																				
2. Across Profiles	A1.4																				
	A1.5																				
	A1.6																				
	A2																				
B. SIGNIFICANT	B1																				
EVALUATIVE DATA	B2																				
1. Primary	B3.1																				
2. Secondary	B3.2																				
3. Other	B4																				
4. Across Profiles																					
C. ADJUSTED PROFILE, based on Measurement Assisted Clinical Evaluation, MACE = (A2/B4 + Clinic'l Judgm't)	C																				
D. VOCATIONAL	D1																				
POSSIBILITIES	D2																				
	D3																				
	D4																				
	D5																				
E. OTHER	E1																				
PROFILING	E2																				
	E3																				
	E4																				
	E5																				

SVP: Duration (low) 1 2 3 4 5 6 7 8 9 (high)

DPT: DATA (low) 0 1 2 3 4 5 6 7 8 (high); PEOPLE; THINGS

GED: Reasoning; Math; Language (low) 1 2 3 4 5 6 (high)

Aptitudes (APT) (low) 1 2 3 4 5 (high)

- Intelligence
- Verbal Aptitude
- Numerical Aptitude
- Spatial Perception
- Form Perception
- Clerical Perception
- Motor Coordination
- Finger Dexterity
- Manual Dexterity
- Eye/Hand/Foot Coordination
- Color Discrimination

NOTES

Physical Demands (PD)						Environmental Conditioning (EC)							Work Activities (WA)										Work Situations (WS)										SVQ	TVQ	DVQ	GOE Work Group
Strength (low) 1 2 3 4 5 (high)	Climb/Balance	Stoop/Kneel/Crouch/Crawl	Reach/Handle/Finger/Feel	Talk/Hear	Seeing	Indoors, Outdoors, Both	Extreme Cold	Extreme Heat	Wet/Humid	Noise/Vibration	Hazards	Adverse Atmospheric Conditions	Deal with Things & Objects	Communication of DATA	Business Contact with People	Scientific & Technical Activities	Routine, Concrete, Organized	Abstract and Creative	For Presumed Good of People	Relating to processes/machines	Resulting in prestige/esteem	Results in tangible/product satisfaction	Direction/control/planning	Interpret feelings/ideas	Influence opinions/attitudes	Make subjective decisions	Make objective decisions	Deal with people	Repetitive/cyclical work	Perform under stress/tension	Meet precisely set limits	Perform variety of duties	Scalar Variables Vocational Quotient	Total Raw Score Vocational Quotient	Dichotomous Variables Vocational Quotient	The Guide to Occupational Exploration (GOE, 1979) published by the U.S. DOL provides the GOE Work groups structure.
PD 1	PD 2	PD 3	PD 4	PD 5	PD 6	EC 1	EC 2	EC 3	EC 4	EC 5	EC 6	EC 7	WA 1a	WA 1b	WA 2a	WA 2b	WA 3a	WA 3b	WA 4a	WA 4b	WA 5a	WA 5b	WS D	WS F	WS I	WS J	WS M	WS P	WS R	WS S	WS T	WS V	SVQ	TVQ	DVQ	GOE Work Group *

TABLE 1: SVQ Weights

VARIABLES	C-Level Guide:	1	2	3	4	5	6	7	8	9
SVP-SPECIFIC VOCATIONAL PREPARATION		1.29	2.57	3.86	5.14	6.43	7.72	9.00	10.29	11.57
D-DEALING WITH DATA		1.03	2.05	3.08	4.10	5.13	6.15	7.18	8.21	
P-DEALING WITH PEOPLE		1.32	2.65	3.98	5.30	6.63	7.96	9.28	10.61	
T-DEALING WITH THINGS		1.13	2.26	3.39	4.52	5.65	6.78	7.91	9.04	
R-REASONING		1.09	2.17	3.26	4.34	5.43	6.51			
M-MATH		.92	1.85	2.77	3.69	4.61	5.54			
L-LANGUAGE		1.06	2.12	3.18	4.25	5.31	6.37			
G-GENERAL LEARNING ABILITY		.67	1.34	2.01	2.68	3.35				
V-VERBAL APTITUDE		.77	1.54	2.31	3.09	3.86				
N-NUMERICAL APTITUDE		1.07	2.14	3.21	4.28	5.35				
S-SPATIAL PERCEPTION		1.07	2.13	3.20	4.26	5.33				
P-FORM PERCEPTION		1.18	2.36	3.55	4.73	5.99				
Q-CLERICAL PERCEPTION		1.19	2.18	3.27	4.36	5.45				
K-MOTOR COORDINATION		1.17	2.34	3.52	4.69	5.86				
F-FINGER DEXTERITY		.75	1.50	2.24	2.99	3.74				
M-MANUAL DEXTERITY		1.09	2.18	3.28	4.37	5.46				
E-EYE-HAND-FOOT COORDINATION		1.44	2.87	4.31	5.74	7.18				
C-COLOR DISCRIMINATION		1.24	2.47	3.71	4.95	6.19				
PD1-STRENGTH		1.51	3.03	4.54	6.06	7.57				
EC1-INDOORS/OUTDOORS/BOTH		1.24	2.47	3.71						

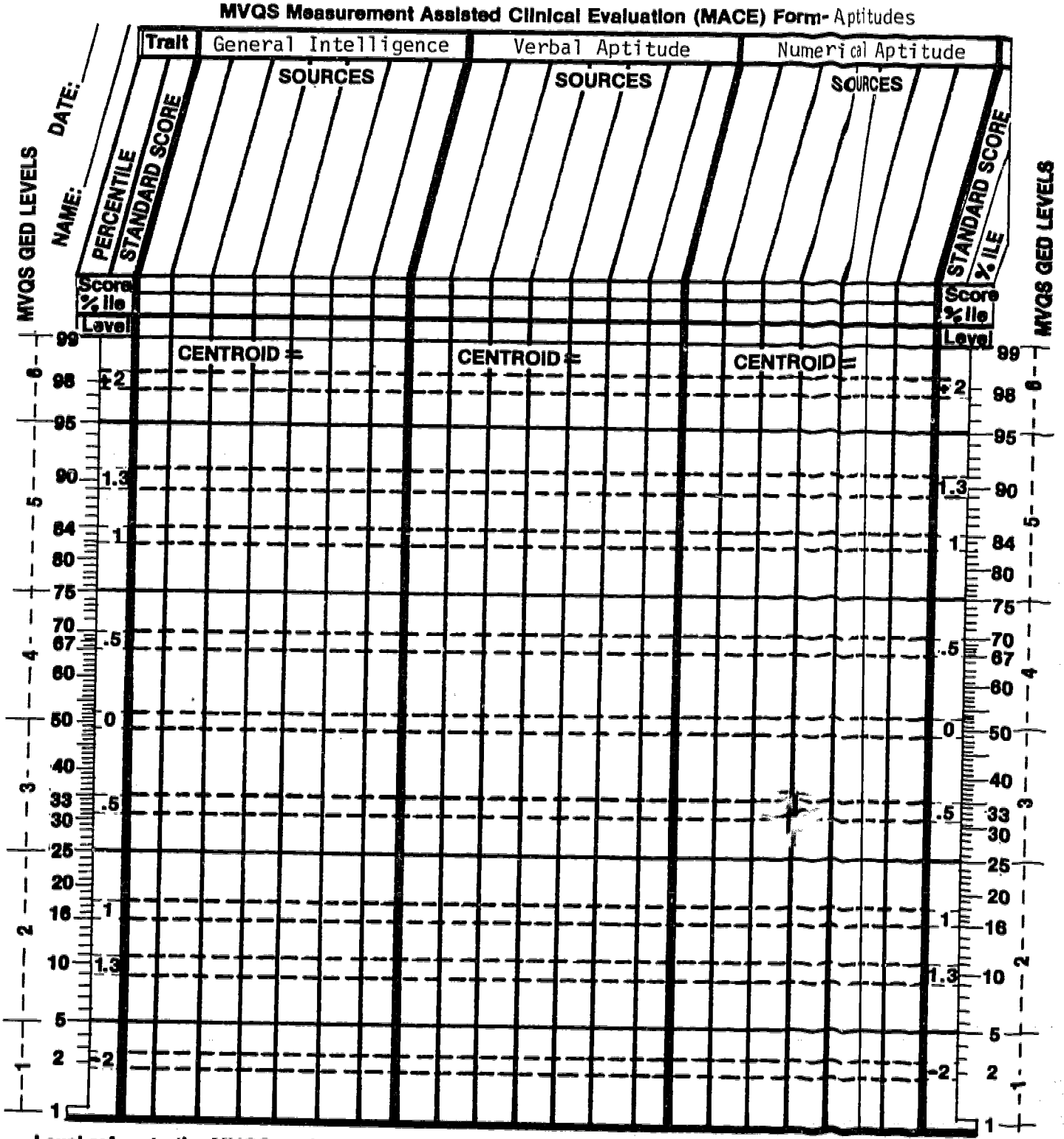
TABLE 2: DVQ WEIGHTS

PD2	Climbing and/or balancing	+2.25
PD3	Stooping, kneeling, crouching	+1.67
PD4	Reaching, handling, fingering	+2.82
PD5	Talking and/or hearing	+3.11
PD6	Seeing	+3.62
EC2	Extreme cold	+.76
EC3	Extreme heat	+.86
EC4	Wet and/or humid	-.43
EC5	Noise and/or vibration	+.84
EC6	Hazards	+2.38
EC7	Adverse atmospheric condition	+.55
1A	Dealing with things/objects	-.78
1B	Communicating data	+2.37
2A	Business contacts with people	+1.98
2B	Scientific/technical work	+13.53
3A	Routing/concrete/organized	-2.53
3B	Abstract/creative work	+8.31
4A	Work for good of people	+4.44
4B	Deal with processes/machines	+2.60
5A	Prestigious/esteemed work	+4.62
5B	Tangible, productive work	+6.55
D	Directing/controlling/planning	+6.48
F	Interpret feelings/ideas	+4.53
I	Influence opinions/attitudes	+5.25
J	Subjective judgements/decisions	+2.77
M	Objective judgments/decisions	+5.04
P	Deal with people	+2.17
R	Repetitive, set procedures	-3.10
S	Stress/emergency/dangerous/risky	+2.52
T	Precision work	+4.69
V	Varied duties/tasks	+3.92

INSTRUCTIONS: To calculate both the SVQ and the DVQ, circle the weight values indicated within the table for each variable listed in the "C" Profile. The C-Level Guide at the top of Table 1 should be used to locate the weight for each variable listed at the left of the table. In Table 2, weights should be circled each time a listed variable has a "1" in the "C" Profile. When Zeroes or Blanks are encountered for variables listed in either table, no weight should be circled.

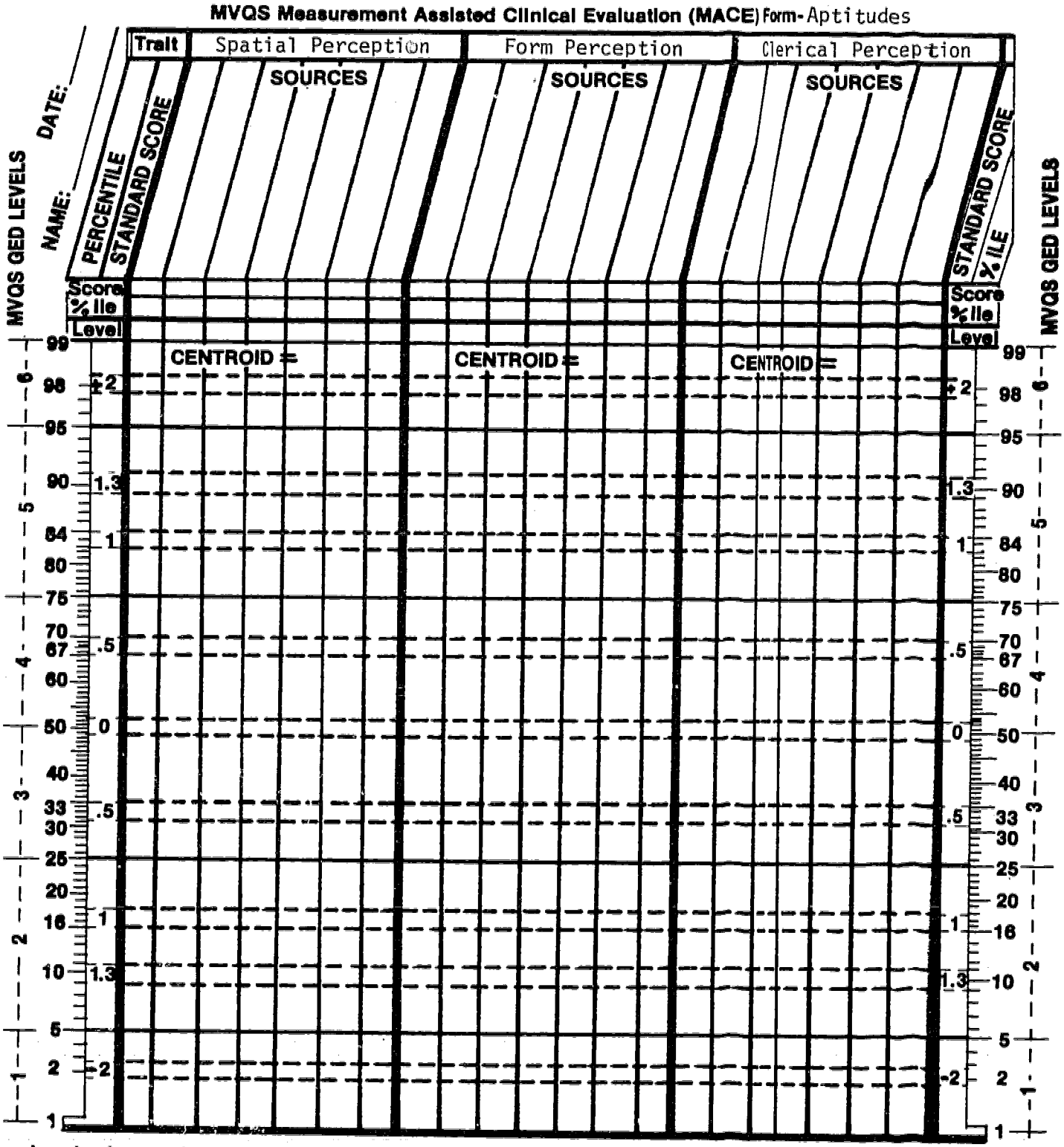
Finally, circled weights in each table should be algebraically summed to produce a score for each which should be recorded where indicated in the box below. The constants are then added to produce the SVQ and DVQ.

	TABLE 1	TABLE 2
Weighted Sum:	( )	( )
Constant:	+2.93	+41.50
	SVQ:	DVQ:



Level refers to the MVQS scale to the left or right of the MACE form. Estimate the level to the nearest 10th. Use the multiple estimates for each trait to calculate the trait CENTROID OR AVERAGE. When recording individual estimates and Centroids on the MVQS Datasheet (Section 3-B) drop all decimals (do not round up or down) and record only whole number level estimates. Record individual estimates in rows B-1, 2, 3.1, and 3.2 (Best four); Highest across these goes in B-4 row; Centroids go in row immediately below B-4. Use all data above the C- Profile along with Clinical Judgement to construct the final C-Profile from which Vocational Quotients are calculated and used to access the data in the Encyclopedia of Job Requirements (EOJR).

Figure 6



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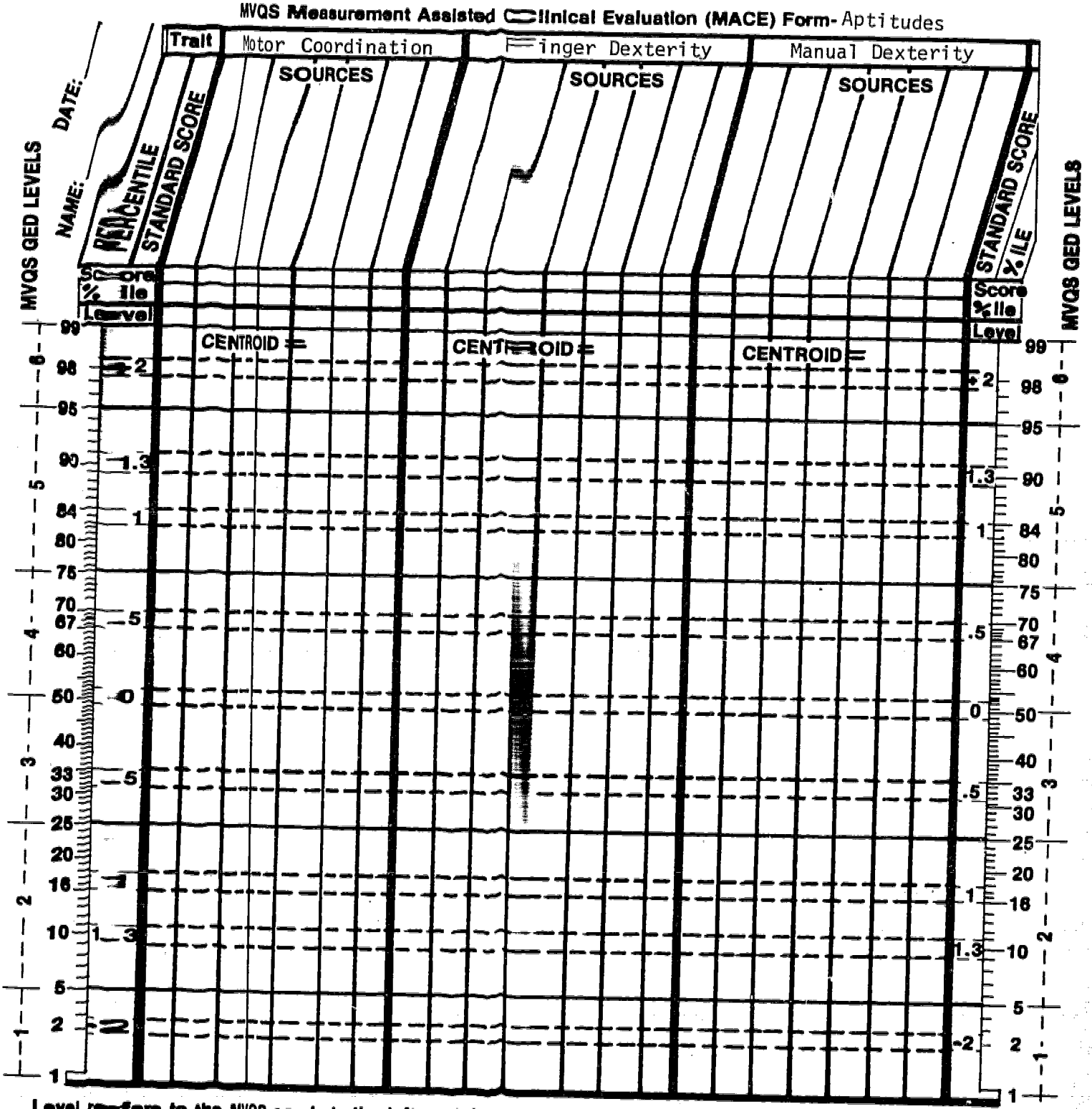

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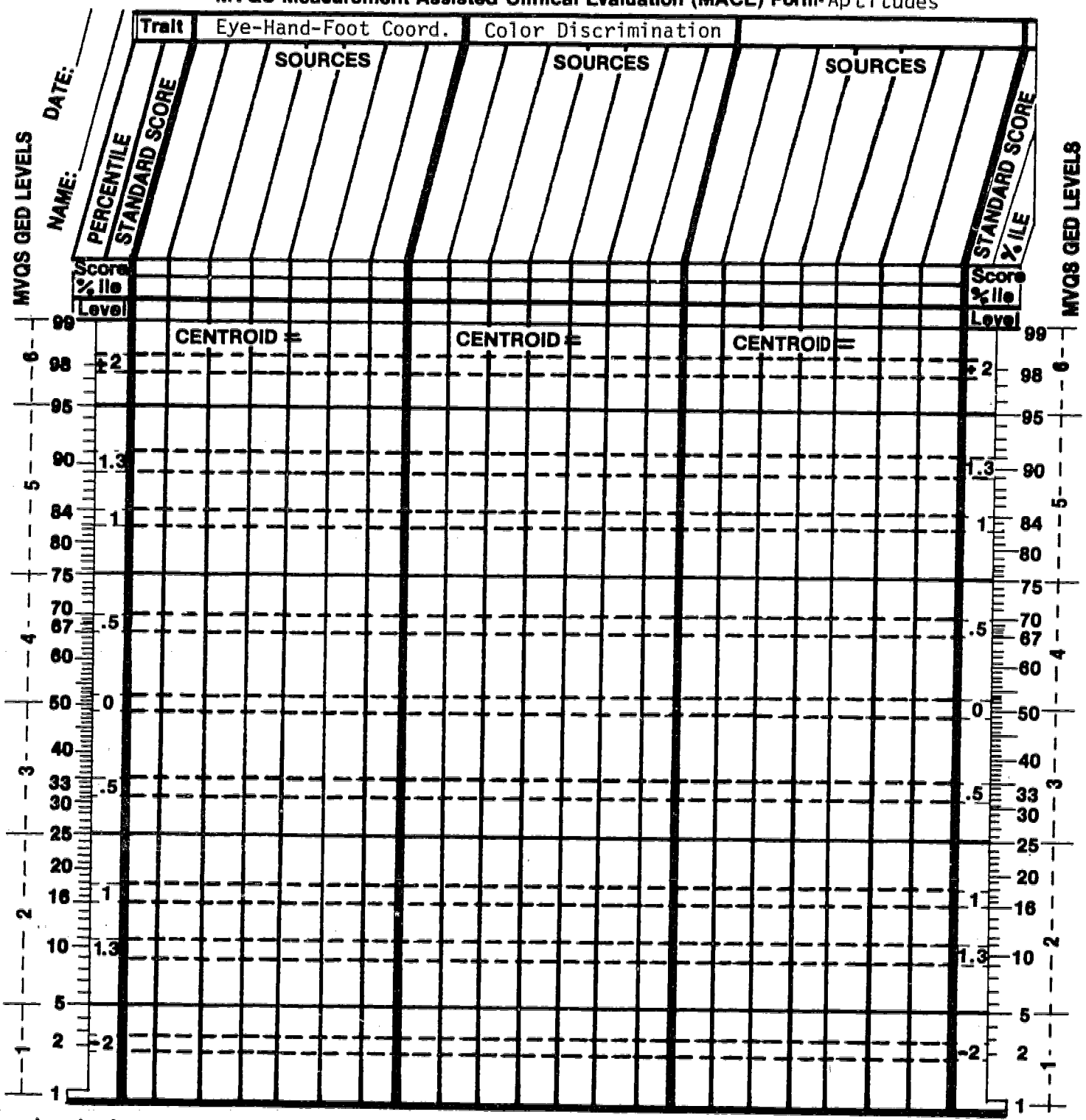
MVQS Measurement Assisted Clinical Evaluation (MACE) Form-Aptitudes



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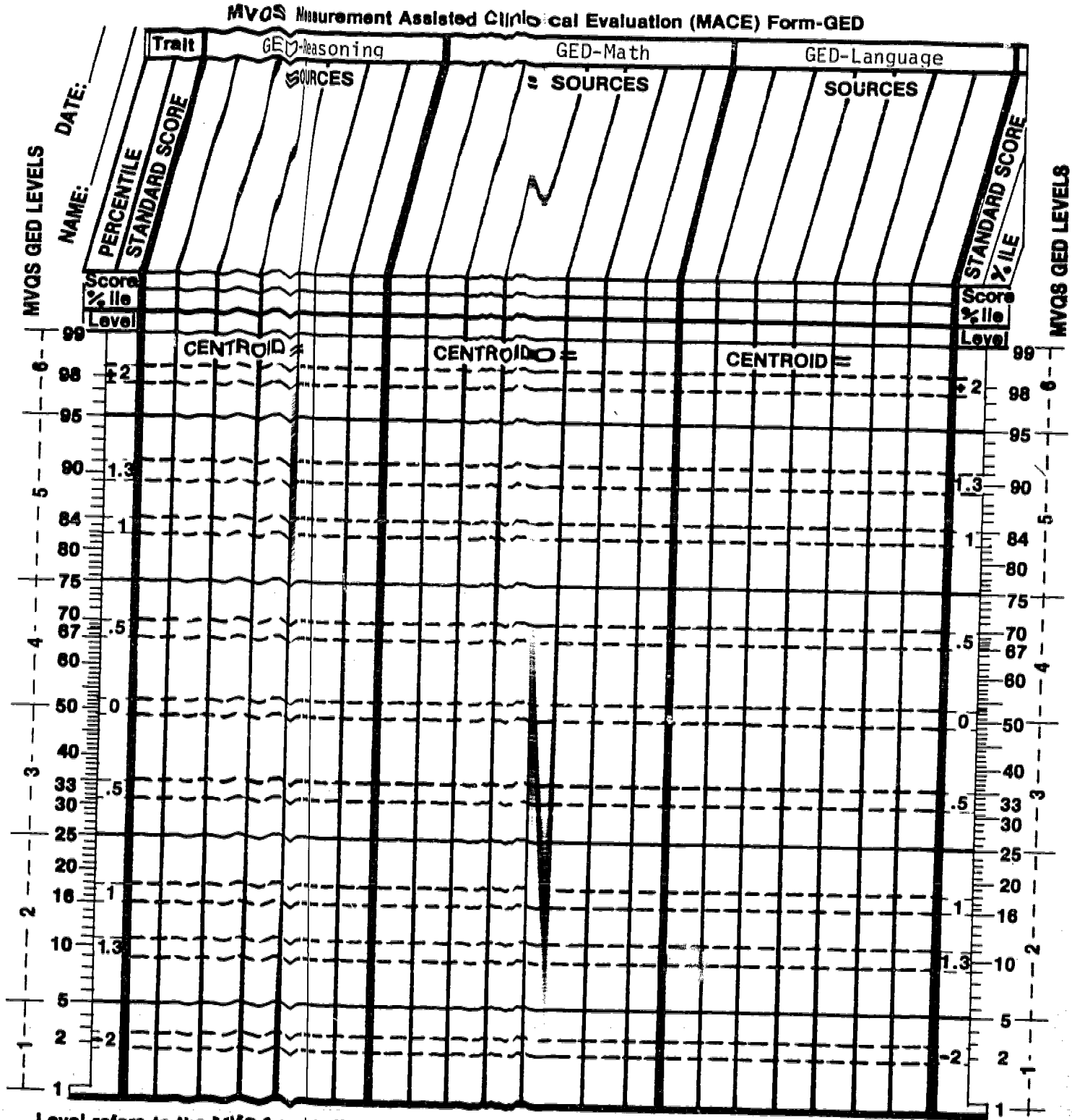

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MVQS Measurement Assisted Clinical Evaluation (MACE) Form-Physical Capacities

Factor Ratings	Physical Capacities (PD1-PD6)
	PD1: STRENGTH (Differs from minor, incidental occurrences)
1 2 3 4	a. Standing:
1 2 3 4	b. Walking:
1 2 3 4	c. Sitting:
	d. Lifting: ____lbs. occasionally; _____lbs. frequently.
	e. Carrying: ____lbs. occasionally; _____lbs. frequently.
	f. Pushing: ____lbs. occasionally; _____lbs. frequently.
	g. Pulling: ____lbs. occasionally; _____lbs. frequently.
	PD2: CLIMB/BALANCE (Differs from minor, incidental occurrences)
1 2 3 4	a. Body agility to ascend or decend: ladders, stairs, scaffolding, ramps, poles.
1 2 3 4	b. Body Equilibrium to prevent falls on: narrow, slippery, erratically moving surfaces.
	PD3: STOOP/KNEEL/CROUCH/CRAWL (Differs from minor, incidental occurrences)
1 2 3 4	a. Move body forward and downward by bending waist at spine.
1 2 3 4	b. Bend legs at knees to come to rest on knee or knees.
1 2 3 4	c. Bend spine and legs simultaneously to move body downward.
1 2 3 4	d. Move about on hands and knees or hands and feet.
	PD4: REACH/HANDLE/FINGER/FEEL (Differs from minor, incidental occurrences)
1 2 3 4	a. Extend hand(s) and arm(s) in any direction with normal range of motion.
1 2 3 4	b. Seize, Hold, Grasp, Turn, or otherwise work with hand(s) using gross dexterity.
1 2 3 4	c. Pick, Pinch, or otherwise work with fingers using fine dexterity.
1 2 3 4	d. Discriminate temperatures, textures using skin receptors (esp. fingertips)
	PD5: TALK/HEAR (Differs from minor, incidental occurrences)
1 2 3 4	a. Ordinary Talking (Express or exchange ideas by means of spoken words as part of job).
1 2 3 4	b. Other Talking (e.g. Relay messages by phone, counsel clients, give detailed instruc).
1 2 3 4	c. Ordinary Hearing (Perceive nature of sounds by ear(s) as part of job).
1 2 3 4	d. Other Hearing (e.g. Record phone messages, tune car engines, listen to clients).
	PD6: SEE (Differs from minor, incidental occurrences)
1 2 3 4	a. Acuity, Near (See clearly at 20 inches).
1 2 3 4	b. Acuity, Far (See clearly at 20 feet+).
1 2 3 4	c. Depth Perception (See in 3-Dimension, judge distances/spatial relationships properly).
1 2 3 4	d. Field of Vision (See vertical/horizontal areas with eyes on fixed point).
1 2 3 4	e. Accommodation (See objects in sharp focus at varying nearpoint distances).
1 2 3 4	f. Color Vision (Identify and distinguish colors correctly).

OVERALL RATINGS: /PD1: 1 2 3 4 5 /PD2: 0 1 /PD3: 0 1 /PD4: 0 1 /PD5: 0 1 /PD6: 0 1 /

Explanation of rating scales:

Factor Rating Scale (Pertaining to personal physical capacities)

1 = Could not do or could do only negligible amount;
2 = Could do occasionally (up to 1/3 of time at work);
3 = Could do frequently (from 1/3 to 2/3 of time at work);
4 = Could do constantly (more than 2/3 of time at work).

NOTE:
Factor Ratings should be based upon relevant medical, psychological, social, educational, vocational, and/or other pertinent evaluative data including client self-assessment.

OVERALL RATINGS ((Links Trait capacity data to job profiles in the Encyclopedia of Job Requirements (McCroskey, 1981))

PD1: 1 = Sedentary; 2 = Light; 3 = Medium; 4 = Heavy; 5 = Very Hvy.
((See MVQS Manual (McCroskey & Perkins 1981) for PD1 level definitions)).

PD2-PD6: Circle level "1" when one or more factors receive a Factor Rating of "3" or Higher. Otherwise, circle the "0" level. A "1" level OVERALL indicates "Significant" Tolerance.

MVQS Measurement Assisted Clinical Evaluation (MACE) Form-Environmental Conditions

Factor Ratings	Environmental Conditions (EC1-EC7) ((NOTE: Adequate Safeguards should not be assumed)).
	EC1: ENVIRONMENT NOTE: For OVERALL RATING (3/4 of way down this page), an individ.
1 2 3 4	a. Inside: is best suited for inside work if he/she needs to be indoors
1 2 3 4	b. Outside· 75% of time or more. Opposite=Outside. Otherwise=Both.
	EC2: EXTREME COLD WITH OR WITHOUT TEMPERATURE CHANGES
1 2 3 4	a. Extreme cold with temperature changes (eg. In & out of ice cream cold storage room).
1 2 3 4	b. Extreme cold without temperature changes (eg. Work in cooler room cutting beef carcasses).
	EC3: EXTREME HEAT WITH OR WITHOUT TEMPERATURE CHANGES
1 2 3 4	a. Extreme heat with temperature changes (eg. Charging a furnace; Drive asphalt machine).
1 2 3 4	b. Extreme heat without temperature changes (eg. Work close to hot stove, laundry dryers).
	EC4: WET AND/OR HUMID CONDITIONS
1 2 3 4	a. Wet conditions (eg. Load damp clothing into laundry tumblers).
1 2 3 4	b. Humid Conditions (eg. Slashing room in cotton-textile mill, run garmet steam-presser).
	EC5: NOISE AND/OR VIBRATION eg. Riveting=130; Tex. Spinning Room=105. Over 80 db is significant noise level.
	a. Estimated maximum number of decibels: ____db. Office with tabulating machines=77db.
1 2 3 4	b. Vibration (eg. Excavate/transport earth). Inside Sedan in City Traffic=85db. Manual typewriter=70; Soldering=50db.
	EC6: HAZARDS (Capacity to tolerate dangers to life, health, or bodily injury routinely).
1 2 3 4	a. Mechanical (Moving mechanical parts; large machinery with fast moving parts)
1 2 3 4	b. Electrical (electrical shock)
1 2 3 4	c. Burns (exposure to heat sources in excess of 160 degrees-F; toxic chemicals)
1 2 3 4	d. Explosives (dynamite)
1 2 3 4	e. Radiant Energy (U-235)
1 2 3 4	f. Heights (Working on scaffolding; telephone poles)
	EC7: ATMOSPHERIC CONDITIONS (Tolerance to marked discomfort over time; Differs fm shrt exp).
1 2 3 4	a. Fumes (Solid particles generated by condensation from gaseous state-molten metal, etc).
1 2 3 4	b. Odors (Noxious nontoxic smells-sulfur, etc.).
1 2 3 4	c. Dusts (Solid particles gen. by handling, crushing, grinding, of ore, metal, coal, etc).
1 2 3 4	d. Mists (Suspended liq. droplets gen. by splashing, foaming, atomizing, etc.).
1 2 3 4	e. Gases (eg. carbon monoxide, hydrogen cyanide, ozone, oxides of nitrogen, etc).
1 2 3 4	f. Poor Ventilation (Insuf. or excessive movement of air causing feeling of suffocation).
1 2 3 4	g. Other:_____

OVERALL RATINGS: /EC1: 1 2 3 /EC2: 0 1 /EC3: 0 1 /EC4: 0 1 /EC5: 0 1 /EC6: 0 1 /EC7: 0 1 /

Explanation of rating scales:

Factor Rating Scale (Pertaining to personal tolerance of Environmental Conditions).

1 = Could not tolerate or could tolerate only negligible amount;
2 = Could tolerate occasionally (up to 1/3 of time at work);
3 = Could tolerate frequently (from 1/3 to 2/3 of time at work);
4 = Could tolerate constantly (more than 2/3 of time at work).

NOTE: Factor Ratings should be based on relevant medical, psychological, social, educational, vocational, and/or other pertinent evaluative data including client self-assessment.

OVERALL RATINGS ((Links Trait capacity data to job profiles in the Encyclopedia of Job Requirements (McCroskey, 1981))

EC1: 1 = Indoors; 2 = Outdoors; 3 = Both Indoors and Outdoors.
((See MVQS Manual (McCroskey & Perkins, 1981) for clarification on EC1 definition & levels.

EC2-EC7: Circle level "1" when one or more factors receive a Factor Rating of "3" or Higher. Otherwise, circle the "0" level. A "1" level OVERALL indicates "Significant" Tolerance.

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Fairmont, MN 56031
Phone (507) 238-1279

HAMLET EVALUATION CENTER

VOCATIONAL EVALUATION REPORT

DATE:

CLIENT:	
AGE:	
MARITAL STATUS:	
PRIMARY DISABILITY:	Low back disability
SECONDARY DISABILITY:	None listed
MEDICATIONS:	None
EDUCATION:	12 plus 1 year AVTI
EVALUATION DATES:	
VOCATIONAL EVALUATOR:	
REFERRAL SOURCE:	
EVALUATION METHODS:	Standardized testing; selected JEVS, and Valpar work samples; situational assessment; evaluator observations/impressions.

EVALUATION/PLANNING CONFERENCE: PROCEEDINGS, RECOMMENDATIONS, AND PROGNOSIS

Proceedings

DATE:
PRESENT:
HIGHLIGHTS: Evaluation results were reviewed and discussed. Client evidenced understanding of and general agreement with evaluation findings. This client's strengths, as measured by evaluation results, include: above average spatial perception, form perception, motor coordination, manual dexterity, eye-hand-food coordination and color discrimination. All other aptitudes were shown to be within the average range.

Transferrable skills demonstrated by this client include: mechanical comprehension, ability to work with tools, and motor coordination for working with relatively large parts. Academic skills in the lower average range indicate that his reading, spelling and arithmetic computation are adequate for ordinary needs, but he would need to put forth extra effort if he was going to engage in activities of a technical nature.

No pain behaviors were observed during the evaluation period. The activities were primarily sedentary, with only a few minutes of standing required on two different occasions. He only complained about back discomfort on one occasion, as described in this report, section entitled "physical problems."

This client's primary stated vocational goal is to own his own buisness, specifically a billiard parlor. Other occupational choices which he identified included various types of inspection occupations, and working in the solar energy field. Evaluation results indicate potential ability to manage a small business, with training, or to work as an inspector in any one of a variety of fields. No information was readily available covering occupations in the solar energy fields, but he appears to have ability to be able to work in a variety of technical occupations; therefore, this field should be a possibility if he is truly interested. A primary consideration in any occupation would have to be his physical condition, specifically his back; whether he could perform any physical activities would have to be determined by a medical doctor based on the specific requirements on the job.

Although some training is available in small business management, the method of entry for the above-listed occupations is typically through on-the-job training, often in a less responsible position. Additional occupations for which he expressed interest are listed in this report under "current vocational functioning." This is by no means an exhaustive list of what he potentially could do.

Recommendations

1. Client should finish gathering information regarding cost, financing, licensing, and other considerations for owning his own billiard parlor.
2. Client should explore career opportunties in the solar heating field, through contact with University, Area Vocational Technical Institutes and other sources.
3. Client should investigate career opportunities and methods of entry in quality control and inspection occupations.
4. Client should continue to seek other employment.

Prognosis

The prognosis for this client becoming competitively employed is considered good, based on evaluation results and his stated motivation to work.

VOCATIONAL SUMMARY

Work History

Significant work history reported for includes:

DOT Code	Job Title	Length
860.681-010	Carpenter (mfd. bldgs.) II	1 year
921.683-050	Industrial-Truck Operator (any)	2 years
741.684-026	Painter, Spray (any ind.)	1 year
769.687-054	Woodworking-Shop Hand (woodworking)	6 months
663.685-018	Molding Cutter (woodworking)	
556.685-082	Vacuum Plastic-Forming Machine Operator (fabric. plastics prod.)	5 years
869.684-018	Assembler (mfd. bldgs.; trans. equip.)	5 years
667.682-054	Radial-Arm Saw Operator (const.; wood)	5 years

Current Vocational Functioning

Client's overall performance and behavior indicate competitive employability. Vocational possibilities considered by this client during the evaluation include the following:

	DOT Code	Job Title
1.	736.281-010	Gun Examiner (firearms)
2.	410.674-010	Animal Caretaker (any ind.)
3.	860.261-010	Carpenter Inspector (any ind.)
4.	822.261-018	Maintenance Inspector (tel. tel.)
5.	736.387-010	Inspector, Assembly (firearms)
6.	919.687-018	Safety Inspector Truck (auto. ser.; motor trans.)
7.	956.387-010	Building Equipment Inspector (light, heat, power)
8.	807.267-010	Shop Estimator (auto. ser.)
9.	769.687-026	Inspector (woodworking)
10.	159.224-010	Animal Trainer (amuse. rec.)

Review of Vocational Possibilities under Consideration:

The client's primary interest continued to be self-employment, specifically owning a billiard parlor. This specific job was not found in the D.O.T., but appears to have duties not entirely unlike other managerial occupations for which he demonstrated potential ability. Of the above-listed occupations, evaluation results indicated that he has ability to perform any of them with a concern for the physical requirements of some. These include numbers 1, 2, 3, 4, and 9, all of which show medium physical demands. According to available medical information he is restricted to light physical activities at this time.

VOCATIONAL PROFILE

Specific Vocational Preparation (SVP)

Specific Vocational Preparation (SVP) is the amount of time required to learn the techniques, acquire information, and develop the facility needed for average performance in a specific job-worker situation. This training may be acquired in a school, work, military, institutional, or a vocational environment. SVP does not include orientation training required of even fully qualified workers to become accustomed to the special conditions of any new job. Nor does it generally include that part of college training which is not organized around a specific vocational objective (e.g., typically the first two years of college).

Based on the information collected, analyzed, and synthesized during the client's evaluation at the Hamlet Evaluation Center, the SVP length indicated by the triple XXX's in the table below appear to be the highest level likely to result in a successful training outcome. SVP lengths of shorter duration will generally increase the probability of success, while SVP lengths of longer duration will generally decrease the probability of a successful training-related outcome.

Level	SVP Length Involved (often decreased by prior training/related work history)
_____	9 = Over 10 years
_____	8 = Over 4 years up to and including 10 years.
XXX	7 = Over 2 years up to and including 4 years.
_____	6 = Over 1 year up to and including 2 years.
_____	5 = Over 6 months up to and including 1 year.
_____	4 = Over 3 months up to and including 6 months.
_____	3 = Over 30 days up to and including 3 months.
_____	2 = More than short demonstration only up to and including 30 days.
_____	1 = Short demonstration only.

SVP training options which appear most likely to produce a successful training-related outcome for this client include those indicated by triple XXX's in the table below.

XXX	7 = College training organized around a specific vocational objective.
XXX	6 = Technical or trade school training.
_____	5 = Vocational high school training.
XXX	4 = Apprentice training (for apprenticeable jobs only).
XXX	3 = In-plant or in-service training.
XXX	2 = On-the-job training.
_____	1 = Essential work experience in related, usually less responsible jobs.

SVP training options which are not indicated by the triple XXX's in the preceeding table will generally have lower probabilities of successful training-related outcomes. These probabilities will generally tend to decrease as the difficulty of the option increases.

Working With Data (D), People (P), and Things (T)

A worker's capacity for working with Data, People and Things can be expressed in terms of the highest appropriate function in each heirarchy at which the worker has occupationally significant capacities.

With respect to the levels of complexity in dealing with Data, People, and Things, this client appears capable of vocational functioning up to and including the levels indicated by the triple XXX's on each of the three heirarchies listed below.

MVQS SCALE FOR DATA Set 1: DATA		MVQS SCALE FOR PEOPLE Set 2: PEOPLE		MVQS SCALE FOR THINGS Set 3: THINGS	
_____	8 = Synthesizing	_____	8 = Mentoring	XXX	8 = Setting up
_____	7 = Coordinating	_____	7 = Negotiating	_____	7 = Perecision Working
XXX	6 = Analyzing	_____	6 = Instructing	_____	6 = Operating-Controlling
_____	5 = Compiling	XXX	5 = Supervising	_____	5 = Driving-Operating
_____	4 = Computing	_____	4 = Diverting	_____	4 = Manipulating
_____	3 = Copying	_____	3 = Persuading	_____	3 = Tending
_____	2 = Comparing	_____	2 = Speaking-Signaling	_____	2 = Feeding-Offbearing
_____	1 = (not used)	_____	1 = Serving	_____	1 = Handling
_____	0 = (not used)	_____	0 = Taking Instructions/ Helping	_____	0 = (not used)

General Educational Development (GED-R, M, & L)

General Educational Development embraces those aspects of education (formal and informal) which contribute to the worker's (a) reasoning and ability to follow instructions (R), and (b) acquisition of "tool" knowledges, such as Mathematical (M) and Language (L) skills. It is educational development of a general nature which does not have a recognized, fairly specific, occupational objective. Ordinarily such educational development is obtained in elementary school, high school, or the first two years of college where general subject matter is usually introduced rather than subject matter specific to any particular occupation. It also derives from experience and individual study.

With respect to reasoning, math, and language development, this client appears to be operating in the Percentile Category indicated by triple XXX's in the table below.

PERCENTILE CATEGORY RANGES

GED FACTORS	1 Very Low (1-5)	2 Below Avg. (5-25)	3 Low Middle (25-50)	4 High Middle (50-75)	5 Above Avg. (75-95)	6 Very High (95-99)
Reasoning (R):				XXX		
Math (M):			XXX			
Language (L):			XXX			

Interpretation: Given the levels of functioning indicated above, this client should be able to:

(1) Apply principles of rational systems to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.
(2) Solve math problems involving routine addition, subtraction, multiplication, and/or division at the 8th grade level and;
(3) Read and spell words at about the 7th grade level.

Vocational Aptitudes

Eleven different aptitudes were rated as either falling into the very high, above-average, average, below-average, or very low category ranges for this client. Estimated levels of functioning for each of the 11 aptitudes were based on central tendency estimates across standardized tests, behavioral observations and other evaluative data used for assessing each aptitude (see attached MVQS MACE form - Aptitudes). Category percentile ranges were modeled after U.S. DOL Job Analysis ranges.

The five rating categories with corresponding percentile ranges are listed across the top of the table which follows. The 11 aptitudes are listed at the left of the table. Aptitudes are plotted by category level with triple "XXX's."

	CATEGORY LEVELS WITH PERCENTILE RANGES				
VOCATIONAL APTITUDES	1 Very Low (1 - 10)	2 Below Avg. (10 - 33)	3 Average (37 - 67)	4 Above Avg. (67 - 90)	5 Very High (90 - 99)
Gen. Intelligence (G):			XXX		
Verbal Aptitude (V):			XXX		
Numerical Aptitude (N):			XXX		
Spatial Perception (S):					XXX
Form Perception (P):					XXX
Clerical Perception (Q):			XXX		
Motor Coordination (K):					XXX
Finger Dexterity (F):			XXX		
Manual Dexterity (M):					XXX
Eye-Hand-Foot Coord. (E):					XXX
Color Discrimination (C):					XXX

Physical Capacities/Preferences/Tolerances (PD-1 to PD-6)

(See attached MVQS MACE Form - Physical Capacities)

Environmental Conditions (ED1 - EC7)

(See Attached MVQS MACE Form - Enviromental Conditions)

Work Activities (WA1A - WA5B)

Based on job requirements from work history and vocational possibilities selected during evaluation, this client appears to prefer or could tolerate significant amounts of work activities indicated by the triple XXX's in the table below.

XXX	WA1a	= Deal with Things & Objects
XXX	WA1b	= Communication of DATA
XXX	WA2a	= Business Contact with People
	WA2b	= Scientific & Technical Activities
XXX	WA3a	= Routine, Concrete, Organized
	WA3b	= Abstract and Creative
	WA4a	= For Presumed Good of People
XXX	WA4b	= Relating to processes/machines
XXX	WA5a	= Resulting in prestige/esteem
	WA5b	= Results in tangible/product satisfaction

Work Situation (WS-D thru WS-V)

Significant work situations for which the client indicated a preference or tolerance are indicated by triple XXX's in the table below.

XXX	WSD	= Direction/control/planning
	WSF	= Interpret feelings/ideas
XXX	WSI	= Influence opinions/attitudes
XXX	WSJ	= Make subjective decisions
XXX	WSM	= Make objective decisions
XXX	WSP	= Deal with people
XXX	WSR	= Repetitive/cyclical work
XXX	WSS	= Perform under stress/tension
XXX	WST	= Meet precisely set limits
XXX	WSV	= Perform variety of duties

WORKER CHARACTERISTICS/BEHAVIORAL OBSERVATIONS

Grooming/Hygiene: Appeared clean. Had long hair, sometimes in a pony tail, and full beard. Dressed in jeans, boots, denim jacket. Carried "trucker's" wallet with a chain. Clothing was clean and in good repair, kept grooming in order.

Physical Problems: Previously-reported back injury. None other reported or apparent. Complained once about back hurting when doing a work sample involving standing on one foot while pressing a pedal with the other; duration of the task was 8 minutes. This was the longest he stood for any task. He was able to sit for a 6 hour day, with only regular breaks and occasionally getting up to get materials. No pain behaviors were observed.

Behavioral Problems: None.

Communications: Spoke clearly, expressed himself effectively.

Co-worker/Supervisory Relationships: Was quiet, friendly. Got along with others. Was cooperative and a willing participant.

Need for Supervision: Took initiative to start and work independently as long as he had a task to do. Tended to just wait and not say anything when finished with a task. Needed only minimal supervision while working on the task.

Punctuality/Attendance: Good. Was present every day. Reported on time.

Ability to Follow and Retain Instructions (Verbal/Written): Could follow ordinary verbal and written instructions.

Ability to Follow Diagrams and Utilize a Model: Following a diagram was not assessed. Could follow a model.

Planning and Organizational Ability: Demonstrated a generally well-organized approach to tasks.

Quality, Accuracy, and Neatness of Work: Good quality after initial instructions. Only occasional reminders needed.

Task Persistence: Good. Persisted to completion.

Task Attending: Was on-task as long as he had work to do.

Attention to Detail: Attended as closely as necessary.

Judgment/Decision Making: No evidence of any judgment problems. Made decisions readily.

Reaction to Frustration: No problems observed.

INSTRUMENTATION AND RESULTS

Various tests, subtests, and work samples administered during this evaluation are reported with their results on the attached MVQS Measurement Assisted Clinical Evaluation (MACE) forms. Results are graphed for visual inspection. Plotting scales reflect both standard score units and percentiles.

Results are grouped according to the basic underlying individual traits which have been assessed during the evaluation. These are listed at the top of each set of seven columns which fall between double lines. The anchor point for all plots is at the 50th percentile which has been highlighted in blue.

The various tests, subtests, and work samples administered are listed at the top of each page. Scores, percentiles, and job functioning levels are reported at the top of each column for each test. The centroid or central tendency estimate across various evaluative data sources is also reported near the top of the page.

Score plots falling below the 10th percentile indicate very low performance; plots between the 10th and 33rd percentile are considered below average; plots between the 33rd and the 67th percentile are considered average; plots between the 67th and 90th percentile are considered above average; and plots above the 90th percentile are considered in the very high range in terms of vocational functioning. These ranges were modeled after the cut-off points used by the Department of Labor when jobs in the United States were being analyzed between 1965 and 1979. Job analysis profiles rated in terms of the same categorical levels may be found in the Encyclopedia of Job Requirements (McCroskey, 1980) for all 12,099 jobs listed in the Dictionary of Occupational Titles (U.S. Department

of Labor, 1977) and the Guide for Occupational Exploration (U.S. Department of Labor, 1979). These occupational information resources are available both at the Hamlet Evaluation Center and at the Mankato Rehabilitation Center.

Normative data, representative of the general adult working population, were used to determine plots for various tests, subtests, and work samples whenever possible. In those cases where industrial standards were used in lieu of normative data, the industrial standard was fixed at the midpoint of average, the 50th percentile. In those cases where clinical judgments were used, the Handbook for Analyzing Jobs (U.S. Department of Labor, 1972) was used to guide level estimates regarding vocational functioning.

Copies of certain other self-explanatory evaluative data will also accompany client reports when available. These include copies of the Career Assessment Inventory, the Minnesota Importance Questionnaire, the MACE Physical Capacities and Environmental Conditions Inventories, and other similar documents. Questions concerning the interpretation of these evaluative data sources should also be referred to the Vocational Services staff either at the Hamlet Center or MRCI.

Thank you for this referral. If you have any further questions, please feel free to contact us.

Sincerely,

Vocational Evaluator
Hamlet Evaluation Unit

/wp

002087

Sister Kenny Institute

In the Spring of 1977, the Sister Kenny Institute became one of the first nationally to offer short-term vocational evaluation programming. The Sister Kenny Institute is a division of the Abbott-Northwestern Hospital Corporation and offers a unique setting for the short-term vocational evaluation program. The program has immediate access to physicians of various specialties, clinical assessment areas (physical therapy, occupational therapy, speech, psychology, mental health, chemical dependency, and the occupational medicine clinic), in offering complete medical/vocational assessment.

Populations served by the Vocational Services Department include industrially injured workers, spinal cord injured, amputees, post-polio, cancer patients, head trauma, cerebral palsy, cardiac, and mental health clients primarily from RSA Region V. Services offered in addition to short-term vocational evaluation include: vocational counseling; job seeking skills training; PLATO training; and complete project with industry placement services.

The Vocational Services Department has nine full-time staff and provides services to more than two thousand clients annually.

The short-term vocational evaluation program evolved from an evaluation need of individuals who had previously been in the competitive marketplace and had obtained vocational transferable skills, work experience, and developed occupational interests. The short-term vocational evaluation was developed to serve such people who suddenly found themselves unable to return to previously held occupations as a result of injuries or disabling illness.

The vocational evaluation program at Sister Kenny Institute is based on detailed knowledge of referral source needs as well as on the needs of clients being served. Specific goals are established with the referral source and client prior to the actual evaluation process. Since significant referrals originate from worker's compensation carriers, long-term disability carriers, physicians, and attorneys, as well as Division of Vocational Rehabilitation counselors, the evaluator needs to be aware of the legal, medical, and vocational issues of each case.

Short-term vocational evaluation at the Sister Kenny Institute is one program where medical concerns and legal issues join the vocational rehabilitation process in an attempt to establish specific and realistic long and short-term vocational goals. While vocational evaluation is the focal point, it must operate within the parameters established by both the legal and medical professions as well as such systems as social security disability, personal injury, worker's compensation, and long-term disability.

Physicians establish the functional limitations of the client, various legal systems establish the extent of permitted disability, financial responsibility, and future rehabilitation options.

The evaluation program, then, operates on a broad knowledge base which includes employment data, occupational literature resources, and specialized vocational evaluation techniques. Additional resources available to the vocational evaluation unit include job seeking skills, job placement, medical case

review, and follow-up. The emphasis of the short-term evaluation is on identification of transferable vocational skills, present skills, physical tolerances, and, of course, age and education as it relates to an individual's return to the competitive labor market through direct job placement.

Specific factors are identified as being important in arriving at return to work conclusions. Production, behavioral observations, quality of work performed, and subjective complaints of fatigue or discomfort are measured against objective medical findings and consistency of performance. Evaluators check consistency between these factors in arriving at viable employment options and evaluation conclusions.

Actual time spent by the client in the vocational evaluation is from three to five days, 8:30 A.M. to 2:00 P.M. The evaluator/client ratio is one to three. Referral information is requested prior to the client being seen for the first time. Referral information includes all relevant material regarding disability diagnosis, date of injury, previous testing results, stated limitations, psychological testing results, complete medical file, and specific referral questions. The client is informed ten days prior to the evaluation starting date. Upon arrival at the evaluation center, the client is informed of evaluation procedures and participates in a short orientation. CARF procedures are followed with the client being asked to sign an orientation checklist after all procedures have been explained.

Evaluation planning begins with a client intake interview, where the evaluation process and desired outcomes are explained by the evaluator. The Initial Intake Form is then completed (Figure 8). Initial emphasis during this interview is to obtain accurate job history information so as to identify transferable vocational skills. The second emphasis is to establish rapport and trust between the client and the evaluator.

The evaluation primarily centers around the administration of commonly used psychological tests (e.g., ABLE, Minnesota Paper Formboard, Purdue Pegboard) and the Valpar Component Work Sample System series. For the sake of standardization, the complete Valpar series is administered to all participants with the exception of those having severely limiting physical disabilities. Psychological tests are group administered when feasible. The Individual Rehabilitation Plan of Action (Figure 9) is used to record the evaluation plan. The "Objectives" are based upon the referral questions; the psychological tests, work samples, etc., are listed "Action to be Taken." The last three columns list the evaluator who will administer the devices, the date of administration, and the anticipated completion date.

All clients undertake systematic vocational exploration as part of their evaluation. The California Occupational Preference Survey (COPS) or Wide Range Interest and Occupational Test (WRIOT) is administered to identify general interest areas. The COPS or WRIOT profile is used with the Dictionary of Occupational Titles and the Occupational Outlook Handbook to more fully explore occupational interests and alternatives. The client interview establishes interest areas to check tested interest. Clients are encouraged to use the Job Placement Handbook, developed and regularly updated by the job placement specialists. This handbook lists current job openings. Such a job search resource assists the client to set realistic vocational goals (e.g.,

job availability) and uses parameters established in conjunction with the client's: physical and emotional capacity and endurance, salary, and job satisfaction. This information is, of course, related to the client's evaluation plan.

Time and error scores, behavioral observations, and test results are recorded on forms on pages 74 to 78. Behavioral observation assesses consistency of pain behaviors and verbal reports with documented medical limitations and objective results. Behavioral observations additionally assess work habits (e.g., punctuality, attendance, concentration, organizational abilities, and interpersonal skills) as well as related capabilities (e.g., mobility, communication, and hygiene).

A counseling out session between the client and evaluator is held to discuss evaluation results and recommendations. This session provides the client with an opportunity to discuss vocational goal planning and also give feedback on the results of the evaluation. The client completes an anonymous program evaluation form which solicits individual response to the vocational evaluation process. The counseling session and program evaluation form allow the evaluator to determine to what extent the client obtained information through the evaluation experience.

Staffing conferences are usually held on Friday. The vocational evaluator is responsible for sharing all information with the client prior to the staffing. The client and referral source are invited to the staffing. The physician, attorney, social worker, claims representative, family members, and other counselors may also be included. The staffing summarizes the evaluation results as shown on Figure 10, including psychological testing results, recommendations, needed support services, and future goals. Staffing information is included in the final report, which is completed within ten days of the staffing date.

The final report (Outline-Figure 11; Report-Figure 12) is the last phase of the vocational evaluation process. Because reports can be used for legal proceedings, they are carefully prepared, using terminology which applies to the legal parameters of the client's case (e.g., DOT definitions of physical capabilities, S.S.D.I. regulations, etc.). Any statements made in the narrative must be backed by other data, such as test results, work sample findings, interviews, behavioral observations, and medical findings. The reports are prepared and sent to the parties authorized by the client. Figure 11 contains the Vocational Evaluation Report Outline and Figure 12 is an example of a Narrative Report.

Over the past six years, the Sister Kenny Institute short-term vocational evaluation program has been responsive to referral source and client needs. Its success is directly attributable to staff and program flexibility. Ongoing contacts with the marketplace, changing legislation, and changing accountabilities have resulted in the development of new assessment programs, such as psycho-vocational evaluation, functional capacity assessment, and stylized evaluation.

INITIAL INTAKE FORM

COMPONENT

DATE_____

___EVAL___JSS
___COUNSELING
___PLACEMENT
___REMEDIAL INSTR.
___CHRONIC PAIN
___DRIVERS ED

EVAL. DATE _____ SOCIAL SECURITY # _____

NAME _____ PHONE _____ (home) (work)

BIRTHDATE _____ AGE _____ SEX _____ MARITAL STATUS _____

ADDRESS _____ (street) (city) (county) (state) (zip)

NEXT OF KIN _____ ANY CHILDREN? _____

REFERRED BY _____ ADDRESS _____

REFERRAL PHONE # _____ PRIMARY PHYSICIAN _____

ADMITTING DIAGNOSIS _____ ACCIDENT? _____

DATE OF INITIAL IN_____ EMPLOYER INVOLVED? _____ WHO? _____

INSURANCE COMPANY _____ CLAIM # _____ CONTACT PERSON _____

HEIGHT _____ WEIGHT (now) _____ WEIGHT (before injury) _____

INVOLVED WITH DVR? _____ COUNSELOR _____

ADDRESS _____ PHONE _____

DO YOU HAVE ANYONE ELSE WORKING WITH YOU OTHER THAN REFERRAL SOURCE? (Placement specialist, Rehab. Nurse, Attorney, Qualified Rehab. Consultant, etc.)

FINANCIAL INFORMATION

UNEMPLOYMENT:	$_____/week	WORKERS COMPENSATION:	$_____/week
LONG-TERM DISABILITY:	$_____/month	SUPPLEMENTAL SECURITY:	$_____/month
SOCIAL SECURITY DISABILITY:	$_____/month	GENERAL ASSISTANCE:	$_____/month
MEDICAL ASSISTANCE:	$_____/month	PENSION:	$_____/month
OTHER:	$_____/_____		

INJURY/HOSPITALIZATION

WHAT LEAD TO INJURY/HOSPITALIZATION?_____

ANY SURGERY?_____

ON-GOING TREATMENT _____

MEDICATIONS (FREQUENCY)_____

Figure 8

OTHER DISABILITY _____

GENERAL HEALTH _____

HAVE YOU BEEN RELEASED TO WORK BY PRIMARY PHYSICIAN? _____

DESCRIBE PRESENT LIMITATIONS IMPOSED BY PHYSICIAN _____

_____

DO YOU USE AIDS FOR: VISION _____ HEARING _____
MOBILITY _____ BACK _____ (TENS unit, brace, etc.)

HAVE YOU RECEIVED A DISABILITY RATING? _____ PRECENTAGE _____

PRESENT PHYSICAL RESTRICTIONS (WHAT YOU FEEL):

SITTING _____ minutes/hours

DRIVING _____ minutes/hours

STATIONARY STANDING _____ minutes/hours

WALKING _____ minutes/hours

HOW OFTEN CAN YOU PERFORM THESE ACTIONS DURING AN AVERAGE WORK DAY:

	NOT AT ALL	OCCASIONALLY	FREQUENTLY	CONTINUOUSLY
Bend/stoop	_____	_____	_____	_____
Squat	_____	_____	_____	_____
Crawl	_____	_____	_____	_____
Climb	_____	_____	_____	_____
Reach (above shoulder)	_____	_____	_____	_____
Reach (forward)	_____	_____	_____	_____
Waist twisting	_____	_____	_____	_____
Kneeling	_____	_____	_____	_____
Balancing	_____	_____	_____	_____
Push/pull	_____	_____	_____	_____
Walk (uneven surfaces)	_____	_____	_____	_____
Additional Comments	_____			

_____

_____

DO YOU FEEL YOU CAN WORK FULL-TIME? _____ PART-TIME _____

DO YOU HAVE PROBLEMS SLEEPING? _____ DO YOU HAVE A DRIVERS LICENSE? _____CLASS_____

TRANSPORTATION: BUS____ PRIVATE VEHICLE____ CARPOOL_____ METRO MOBILITY____ OTHER _____

EDUCATION:

DO YOU HAVE A HIGH SCHOOL DIPLOMA? _____ GED? _____

IF SO, DATE GRADUATED AND WHAT SCHOOL _____

IF NOT, GRADE COMPLETED _____ COURSE(S) YOU ENJOYED _____

COURSE(S) YOU DISLIKED _____

POST HIGH SCHOOL TRAINING OR EDUCATION (e.g., ON-THE-JOB TRAINING, VOCATIONAL-TECHNICAL SCHOOL, COLLEGE TRAINING, LICENSURE) _____

_____

_____

_____

HOBBIES/INTERESTS _____

MILITARY SERVICE:

BRANCH _____ RANK _____

ACTIVE DATES _____ TYPE OF DISCHARGE _____

JOB TITLE (MOS) _____ DUTIES _____

EMPLOYER INVOLVED AT TIME OF INJURY

NAME OF COMPANY _____

SUPERVISOR _____

DATES OF EMPLOYMENT _____ SALARY WHEN INJURED _____

JOB TITLE _____

DUTIES/SKILLS _____

MACHINES OPERATED _____

UNION (NAME) _____ BUSINESS AGENT _____

LAST DATE OF EMPLOYMENT _____

EMPLOYER _____
(name) (address)

DATES _____ SALARY _____

JOB TITLE _____ DUTIES _____

_____

REASON FOR LEAVING _____

2. EMPLOYER _____
(name) (address)
DATES _____ SALARY _____

JOB TITLE _____ DUTIES _____

_____

REASON FOR LEAVING _____

3. EMPLOYER _____
(name) (address)
DATES _____ SALARY _____

JOB TITLE _____ DUTIES _____

_____

REASON FOR LEAVING _____

4. EMPLOYER _____
(name) (address)
DATES _____ SALARY _____

JOB TITLE _____ DUTIES _____

_____

REASON FOR LEAVING _____

5. EMPLOYER _____
(name) (address)
DATES _____ SALARY _____

JOB TITLE _____ DUTIES _____

_____

REASON FOR LEAVING _____

WHICH JOB(S) DID YOU LIKE BEST? _____

WHY? _____

STARTING SALARY DESIRED _____ ARE YOU WILLING TO RELOCATE? _____

IF SO, WHAT AREAS WOULD YOU CONSIDER? _____

CURRENT JOB GOAL? _____

WHAT DO YOU HOPE TO GAIN FROM THIS PROGRAM? _____

Client Name _____ INDIVIDUAL REHABILITATION PLAN OF ACTION

Referral Source _____

OBJECTIVES	ACTION TO BE TAKEN	WHOM	INITIATION DATE	PROJECTED COMPLETION DATE

Plan Review Date: _____

Revisions:

Plan Review Date: _____

Statement of Responsibility:

I understand that it is my responsibility to cooperate in the Plan of Action and make reasonable efforts to achieve the stated objectives. I am aware that my referral source will receive progress updates.

Date _____ Client Signature _____ Staff Signature (Title) _____

Figure 9

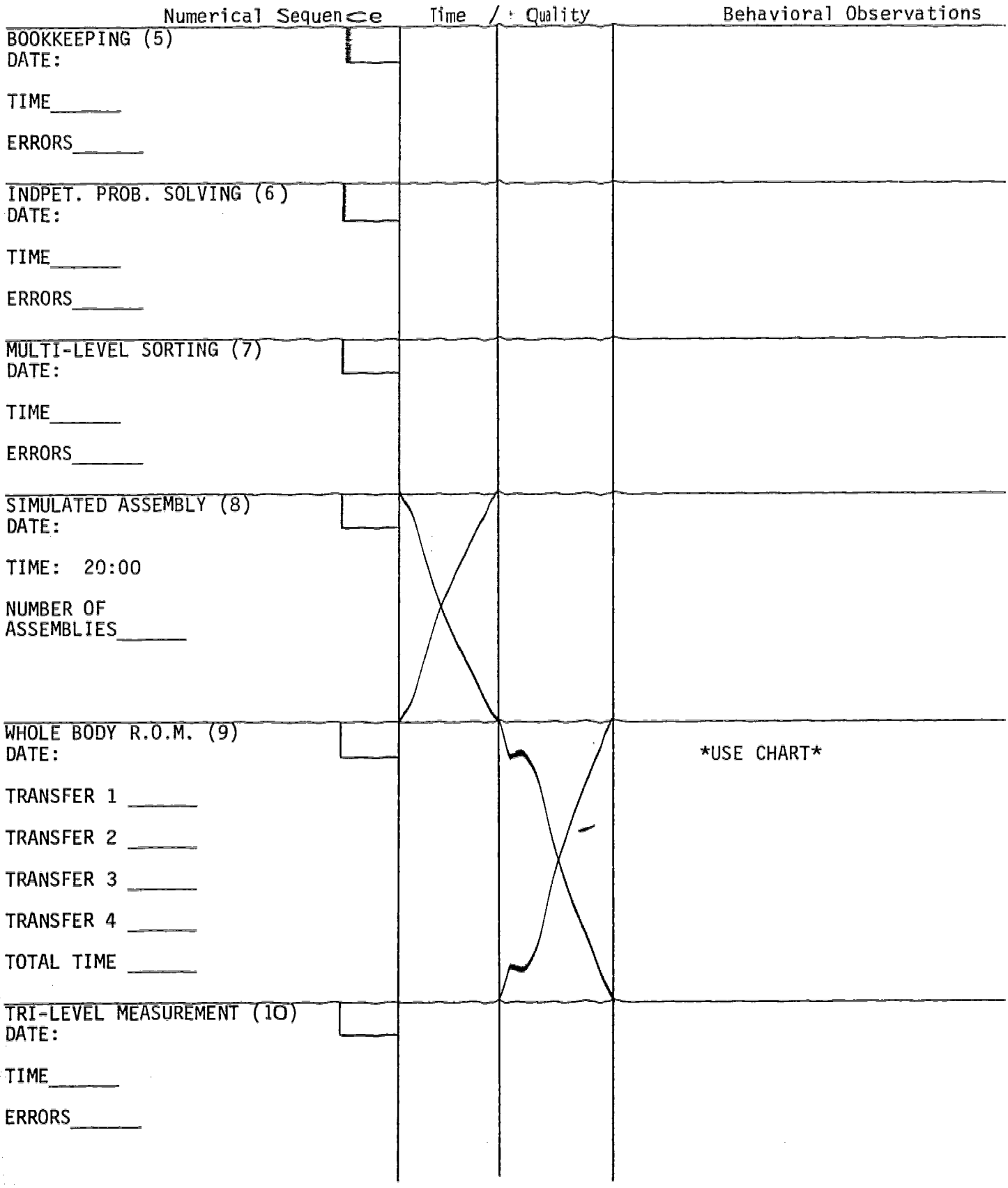
NAME:

STAFFING DATE: _____ T NT

EVAL. DATE _____

Numerical Sequence	Percentile Time / Quality	Behavioral Observations
SIZE DISCRIMINATION (1) DATE: ASSEMBLY TIME_____ ERRORS_____ DISASSEMBLY TIME_____ ERRORS_____		
NUMERICAL SORTING (2) DATE: ASSEMBLY TIME_____ ERRORS_____ DISASSEMBLY TIME_____ ERRORS_____		
UPPER EXTR. R.O.M.(3) DATE: TIME DOMINANT_____ TIME OTHER_____ TIME DISASSEMBLY_____		*USE CHART*
CLERICAL (4) DATE: MESSAGE TAKING: TOTAL_____ CORRECT_____ %ILE_____		
MAIL SORTING (4A) DATE: TIME_____ ERRORS_____		
ALPHABETICAL FILING (4B) DATE: TIME_____ ERRORS_____		

Figure 10


Numerical Sequence
Time / Quality
Behavioral Observations
BOOKKEEPING (5)
DATE:
TIME_____
ERRORS_____
INDPET. PROB. SOLVING (6)
DATE:
TIME_____
ERRORS_____
MULTI-LEVEL SORTING (7)
DATE:
TIME_____
ERRORS_____
SIMULATED ASSEMBLY (8)
DATE:
TIME: 20:00
NUMBER OF ASSEMBLIES_____
WHOLE BODY R.O.M. (9)
DATE:
TRANSFER 1 _____
TRANSFER 2 _____
TRANSFER 3 _____
TRANSFER 4 _____
TOTAL TIME _____
USE CHART
TRI-LEVEL MEASUREMENT (10)
DATE:
TIME_____
ERRORS_____

Numerical Sequence	Time / Quality	Behavioral Observations T1	T2	T3
EYE-HAND-FOOT COORD. (11) DATE: TOTAL TIME_____ TOTAL POINTS _____				
SILO LADDER (12) DATE: DISASSEMBLY TIME_____ ERRORS_____ ASSEMBLY TIME_____ ERRORS_____				
SOLDERING (13) DATE: TOTAL TIME_____ TOTAL ERRORS_____				
ELECTRONIC CIRCUITRY (14) DATE: TOTAL TIME_____ TOTAL ERRORS_____				
INTEGRATED PEER PERF. (15) DATE: TOTAL TIME_____ TOTAL ERRORS_____				
TYPING (16) DATE: TWO 5 MINUTE TIMED TESTS 1_____ 2_____ ERRORS_____				
SMALL TOOLS (17)/DRAFTING (18) DATE: TOTAL TIME/ASSEMB_____ TOTAL ERRORS/DISASSMB_____				

NUMERICAL SEQUENCE	WORK SAMPLE TITLE	TIME %ILE	QUALITY %ILE
_____	SIZE DISCRIMINATION	_____	_____
_____	NUMERICAL SORTING	_____	_____
_____	UPPER EXTREMITY RANGE OF MOTION _____		
_____	CLERICAL: MESSAGE TAKING		_____
_____	MAIL SORTING	_____	_____
_____	ALPHABETICAL FILING	_____	_____
_____	BOOKKEEPING	_____	_____
_____	INDEPENDENT PROBLEM SOLVING	_____	_____
_____	MULTI-LEVEL SORTING	_____	_____
_____	SIMULATED ASSEMBLY		_____
_____	WHOLE BODY RANGE OF MOTION	_____	
_____	TRI-LEVEL MEASUREMENT	_____	_____
_____	EYE-HAND-FOOT COORDINATION	_____	_____
_____	SILO LADDER	_____	_____
_____	SOLDERING	_____	_____
_____	ELECTRONIC CIRCUITRY	_____	_____
_____	INTEGRATED PEER PERFORMANCE	_____	_____
_____	TYPING	_____	_____
_____	SMALL TOOLS	_____	_____
_____	DRAFTING	_____	_____

PSYCHOMETRIC TESTING (Date Administered _____)

Adult Basic Learning Examination - II: (Non-timed/measures to 9th grade level)

Reading	_____grade level
Arithmetic Computation	_____grade level
Arithmetic Problem Solving	_____grade level
Arithmetic Total	_____grade level

GATES MacGinitie Reading Survey: (Timed/measures to 12th grade level)

Speed and Accuracy	_____grade level
Vocabulary	_____grade level
Comprehension	_____grade level

Wide Range Achievement Test:

(Non-timed)	Reading Pronunciation	_____grade level____%	Compared to
(Non-timed)	Spelling	_____grade level____%	Individuals
(Timed)	Arithmetic	_____grade level____%	in Age Group

Minnesota Spatial Relations: _____% Norms: _____

Minnesota Paper Formboard: Raw Score _____ at _____% Norms: _____
(Timed 20:00)

Purdue Pegboard: (Timed 50% average/fine finger manipulation and dexterity)

Right hand	_____%	
Left hand	_____%	
Both hands	_____%	Norms: _____
Right + Left + Both	_____%	
Assembly	_____%	

General Clerical:

Clerical Subscore	_____%	
Verbal Subscore	_____%	
Numerical Subscore	_____%	Norms: _____
Total	_____%	

Minnesota Clerical:

Name Comparison	_____%	
Number Comparison	_____%	Norms: _____

Bennett Mechanical Comprehension and Aptitude: (Timed, 30 minutes)
Raw Score _____% Norms: _____

California Occupational Preference Survey: (75% and above is considered a high area of vocational interest)

1. _____% 2. _____% 3. _____%

4. _____% 5. _____% 6. _____%

Wide Range Interest-Opinion Test:

1. _____% 2. _____% 3. _____%

ASSETS

LIMITATIONS

RECOMMENDATIONS

OCCUPATIONAL CONSIDERATIONS

TOLERANCES

Standing Stationary _____ Others:

Walking _____

Sitting _____

Lifting _____

Signatures of those in attendance _____ _____

_____ _____

SISTER KENNY INSTITUTE
VOCATIONAL EVALUATION REPORT
OUTLINE

Name _____ Telephone Number _____

Address _____ Social Sec. # _____

_____ Referred By _____

Birthdate _____ Evaluation Period _____

Age _____ Sex _____ Date _____

I. BACKGROUND INFORMATION:

Age
Sex
Marital Status
Reason for Referral
Educational History
Work History
Medical History

A. Date of injury
B. Medical circumstances surrounding injury as reported by client and as indicated in referral information.

II. GENERAL IMPRESSIONS:

Physical Appearance
Grooming and Hygiene
Initial Impressions and Discussions

III. WORK TOLERANCE/ENDURANCE:

Gross, manual and fine finger dexterity.
Measurement of upper extremity range of motion, including shoulder, upper arm, forearm, elbow, wrist, and hand as they relate to the functional ability to perform job tasks.
Measurement of gross body movements of the trunk, arms, hands, legs, and fingers as they relate to the functional ability to perform job tasks.
Sitting, standing, bodily twisting and bending tolerances as they relate to ability to perform job tasks.

IV. PSYCHOMETRIC TESTING RESULTS:

Arithmetic grade levels/percentiles
Arithmetic problem solving, grade levels/percentiles
Arithmetic computation, grade levels/percentiles
Spelling

Figure 11

IV. PSYCHOMETRIC TESTING RESULTS (continued):

Reading grade levels
- A. Vocabulary
- B. Comprehension
- C. Pronunciation

Spatial form perception
Clerical aptitudes
Mechanical aptitudes
Interest survey

V. SUMMARY:

Work Habits:

- A. Punctuality
- B. Reliability
- C. Acceptance of supervision and constructive criticism
- D. Cooperativeness
- E. Interaction with co-workers (interpersonal skills)
- F. Communication skills
- G. Ability to follow instructions
- H. Tolerance/frustration level for pressure
- I. Quality of work
- J. Performance time/work rate

Personality Characteristics:

- A. Atypical/positive/negative

Explanation of Recommendations:

- A. Reasons for recommendations (i.e., JSS: light/sedentary work, etc.)

Modifications/Restructuring

Results of Staffing

- A. Date
- B. Who attended

Statement as to Clients' Employability Status Following Review of Vocational Evaluation

VI. VOCATIONAL ASSETS:

Transferrable skills, strengths identified by evaluation

VII. VOCATIONAL LIMITATIONS:

VIII. RECOMMENDATIONS:

IX. DIRECT PLACEMENT/ON-THE-JOB TRAINING

SISTER KENNY INSTITUTE
VOCATIONAL EVALUATION REPORT

NAME Alice Davis TELEPHONE NUMBER 235-5682

ADDRESS 3839 78th Street, Apt. 24 SOCIAL SECURITY #

Fridley, MN REFERRED BY:

DIRTHDATE April 10, 1927 EVALUATION PERIOD 1/18/82 to 1/22/82

AGE 55 SEX Female DATE 2/4/82

BACKGROUND INFORMATION:

Ms. Davis is a 55 year old widowed female presently living in Fridley, Minnesota. She was referred to Sister Kenny's Department of Vocational Services to identify her interest areas and aptitudes, identify her physical capacity for work other than jobs requiring repetitive hand motions, observation of work behaviors, determine her current level of intellectual functioning and determine a feasible job goal. Ms. Davis indicated that she completed her education up through the eighth grade. No formal post high school training or education was indicated.

The most recent past work experience has included employment as a meterer at Stevens International where her job duty was to place labels on packages and identify correct postage. Machines operated were a metering machine, adding machine and cash register. She indicated that her work was placed on a conveyor belt which required her to work quickly. Other work experience has included employment as a counter girl at a dry cleaners where her job duties were to wait on customers, ticket clothing, assemble orders, perform light record keeping. She has also been employed as a counter girl in a bakery where her job duty was to wait on customers.

Referral information available to the evaluator indicated that Ms. Davis has a diagnosis of bilateral carpal tunnel syndrome. This means that she is unable to perform repetitive manual tasks. This report also indicated that recent testing has indicated a bulging cervical disc. The discomfort resulting from this has reportedly subsided due to traction.

GENERAL IMPRESSIONS:

Initial impressions were those of a pleasant, friendly woman who stood approximately 5'3" and weighed approximately 155 pounds. She was very informative in offering information concerning her medical, educational and vocational backgrounds. She was appropriately dressed for a work setting. The information she presented appeared to be very factual.

Ms. Davis indicated that her disability of carpal tunnel syndrome was a result of repetitive work. She indicated that she has had three surgeries. The first surgery was in June of 1980 on the right wrist, the second surgery in August of 1980 on the left wrist and an ulnar nerve release surgery on the left hand in April of 1981.

In terms of other physical difficulties, Ms. Davis indicated that her neck has been recently bothering her. She stated that in November of 1981 she had traction which has alleviated the pain radiating down her arm. She indicated that her doctor has stated her neck problem is due to a bulging disc.

Ms. Davis also indicated that she has arthritis in her jaw and takes medication for this.

Figure 12

It was Ms. Davis' understanding that she was released to return to work with the restriction of limited hand use and lifting. She indicated that she was more limited with her left hand than right. She stated that a disability rating of 10% to each arm was given to her.

In terms of limitation, Ms. Davis indicated that she could crawl only occasionally if not at all, reach above her shoulder occasionally and push and pull only occasionally. She also stated that keeping her head constantly in a downward position bothers her neck.

In terms of vocational planning, Ms. Davis indicated that she would desire a starting salary of approximately $4.15 an hour. She indicated she was not willing to relocate from her Fridley residence. Her current job goal was undetermined. She also stated that she did not enjoy driving as this made her nervous.

WORK TOLERANCE/ENDURANCE

During the vocational assessment Ms. Davis was asked to perform tasks requiring her to work in a sitting and standing position, use her upper extremities and also to perform whole body range of motion. Assessment ratings were determined by individual task performances in relation to competitive, industrial employment standards. Motion, time and measurement norms were used as validated by the Valpar Corporation. Performance times and quality of work were recorded in percent rankings, with rankings of 100% indicating entry-level, competitive employment standards. The last four pages of this report provide a complete description of the work samples, percent rankings and behavioral observations.

Based upon observations and comments made by Ms. Davis, it appeared that Ms. Davis had difficulty performing certain activities which are frequently found in a general work setting. Ms. Davis indicated that she experienced constant numbness of the two small fingers of both hands. She would occasionally describe these fingers as being stiff also. Ms. Davis would also appear to report that her left hand would hurt more so or more often than her right.

Activities which would aggravate discomforts to her hands were frequent twisting of the wrists, frequent flipping of cards, frequent grasping of small objects and pulling of small objects from the pegboard. Occasionally, Ms. Davis was observed to drop items she was working with.

On two particular work samples, Clerical Comprehension and Clerical Bookkeeping, Ms. Davis was required to write. At no time did she indicate that she had difficulty performing this task. During her Clerical Bookkeeping she actually performed this task for a total of 30 minutes.

Manipulation of small hand, precision tools (calipers and micrometer) she was observed to have difficulty operating these tools accurately. It should be noted that twisting of the fingers and wrist was involved.

It was also noted that when Ms. Davis was required to perform frequent turning of nuts onto bolts she would attempt to avoid twisting of her wrist by rolling the nuts between both hands.

It was also noted on one work sample, Whole Body Range of Motion, that she indicated she experienced a slight ache in the neck when she was required to look overhead. She did, however, state this discomfort did subside when she stopped looking overhead.

In terms of comparing Ms. Davis' performance time scores to competitive employment standards it appeared that she was working generally at the average rate of speed. This would suggest that Ms. Davis was able to tolerate her discomforts in order to work at what is considered to be an entry-level, average competitive standard.

WORK SKILLS:

Ms. Davis demonstrated a variety of work skills that could be utilized in a variety of work settings. She demonstrated the ability to follow simple-to-complex verbal and diagrammatic instructions and retain them through to completion of the task. She also demonstrated average size discrimination. Her problem solving skills were above average whether or not she was required to make decisions based upon set rules and regulations or whether she had to make conclusions from her own experiences. Her clerical skills were above average in mail sorting and alphabetical filing and slightly below average in telephone answering. Her errors in telephone answering were noted to be in terms of omitting information rather than recording incorrect information. Ms. Davis was also noted to have above average skills in accuracy when required to match series of numbers, letters and colors.

Skills noted to be below average were in Eye-Hand-Foot Coordination. This appeared to be more of a difficulty in coordinating her hands and feet simultaneously rather than any interference due to physical discomforts. Ms. Davis did not report any physical discomforts when performing this work sample.

PSYCHOMETRIC TESTING: (Date administered 1/20/82)

Adult Basic Learning Exam:

Arithmetic Computation	6.9 grade level
Arithmetic Problem Solving	7.1 grade level
Arithmetic Total	7.0 grade level

Gates-MacGinitie Reading Survey

Speed and Accuracy (timed)	9.2 grade level
Vocabulary (untimed)	12.7+ grade level
Comprehension (untimed)	10.5 grade level

NOTE: This test does not score higher than the twelfth grade level.

Wide Range Achievement Test:

Reading Pronunciation	11.5 grade level/92%ile
Spelling	10.9 grade level/90%ile
Arithmetic	7.2 grade level/79%ile

Norms: Female within Ms. Davis' age group.

Minnesota Paper Formboard:

50%ile
Norms: Female applicants to an electrical appliance manufacturing company.

Purdue Pegboard:

Right Hand	25%ile
Left Hand	5%ile
Both Hands	5%ile
Right + Left + Both	5%ile
Assembly	6%ile

Norms: Female industrial applicants.

Minnesota Clerical:

Name Comparison	65%ile
Number Comparison	40%ile

Norms: All applicants to banks.
NOTE: This test assesses accuracy and speed in determining quality of work.

California Occupational Preference Survey:

Skilled/Science	98%ile	Professional/Business	85%ile
Professional/Science	92%ile	Skilled/Business	80%ile
Professional/Technology	90%ile		

SUMMARY:

During this evaluation Ms. Davis was a very pleasant and cooperative woman. She was punctual in attendance, cooperative with the supervisor and persevered through to task completion on all those requested by the evaluator.

Positive work skills were found in her ability to follow simple-to-complex (approximately 3-10 steps) verbal and diagrammatic instruction; size discrimination; mail sorting and alphabetical filing; problem solving; accuracy in matching series of numbers, letters and colors. She did demonstrate below average eye-hand-foot coordination.

Psychometric testing indicated average arithmetic and reading skills when compared to females her own age. She also demonstrated average spatial perception utilizing abstract thought. This means that she had an ability to mentally visualize factors and manipulate them so in order to solve problems.

Ms. Davis was given the Minnesota Clerical test in order to assess her accuracy and speed when comparing numbers and names. She performed slightly better on the names comparison when compared to all applicants at a bank. This type of skills is required on a job such as proofreading.

On the Purdue Pegboard, a test assessing manipulative dexterity, especially when working with small and fine objects, she received below average percentile ratings. Her highest score was with her right hand and this seemed to be consistent with her being right hand dominant. However, she did indicate that she experienced slight numbing of the fingertips of her right hand. This test did indeed indicate that Ms. Davis has difficulty in manipulating small objects.

Ms. Davis' performance time and quality scores when compared to industrial employment standards ranged within the average competitive level. This would indicate that Ms. Davis does possess several skills and abilities that are comparable to those utilized in many competitive jobs and that she is able to tolerate her discomforts to be able to work at an average competitive rate of speed.

After work sample administration was completed vocational exploration was initiated. Ms. Davis utilized the results of her California Occupational Preference Survey, the want ads and a Job Book, listing available jobs within the community. Initially, she listed many jobs which would require further education or training. Therefore, the evaluator helped her in identifying other work areas which she could qualify for with her present skills. A list of these job suggestions are given at the end of this report.

In discussing vocational plans, Ms. Davis indicated that she would prefer to find employment on a full-time basis for financial reasons. She also indicated that she would prefer to work as close to her home area as possible and avoid much driving. She indicated that driving does make her nervous. Ms. Davis also had a concern about interviewing and how to present her disability without jeopardizing her chances of getting a job. Based upon the fact that she does have these questions it is suggested that she participate in a job seeking skills class, in either individual or group setting for development of a current resume, correct completion of application forms, positive interviewing techniques especially when speaking of her disability. It may also be suggested that she complete a GED Pretest. The scoring of this pretest would identify whether Ms. Davis has a likelihood of successfully passing a GED or if she requires further brush-up in any particular area of the test.

In terms of physical capabilities it appeared that Ms. Davis had difficulty when performing frequent finger and hand manipulations such as twisting and turning, flipping of cards and grasping of small objects. Writing did not appear to pose a problem during this evaluation. Ms. Davis also indicated that overhead glancing also caused discomfort to her neck temporarily. She indicated this discomfort subsided as soon as she stopped looking overhead.

In considering job ideas it is felt that Ms. Davis may be able to perform work that has varied job duties, involves problem solving skills, utilizes her organizational ability, ability to work independently and be accurate. It is suggested that she avoid jobs requiring repetitive hand, wrist, finger manipulations and overhead reaching. Ms. Davis indicated that she would prefer a job which had few concentrated arithmetic calculations. Ms. Davis appeared to investigate clerical type jobs, however, she noticed that typing skills were frequently required. Ms. Davis indicated that she does not type presently. However, she would be interested in learning. Ms. Davis may consider taking a course in typing, either by PLATO training or home practice in order to obtain these typing skills which would open more job opportunities. The goal would be to obtain an approximate speed of 30 words per minute.

Thank you for this referral to this one week evaluation. It was a pleasure working with Ms. Davis and participating in her vocational planning. The above statements in this report were recorded for your consideration in relation to the objective findings of the evaluation as well as the subjective comments offered by the client during the assessment program.

VOCATIONAL ASSETS:

1. Punctual in attendance.
2. Cooperative with the supervisor.
3. Persevered through to task completion.
4. Positive work skills in: ability to follow simple-to-complex verbal and diagrammatic instructions; size discrimination; mail sorting; alphabetical filing; problem solving; accuracy in matching series of numbers, letters and colors.
5. Average arithmetic and reading skills; spatial perception utilizing abstract thought.
6. Time and quality scores ranged within the average competitive level.

VOCATIONAL LIMITATIONS:

1. Demonstrated below average eye-hand-foot coordination skills.
2. Demonstrated below average fine finger dexterity.
3. Reported constant numbness of two small fingers of both hands; occasional ache in the neck with overhead reaching.
4. Observed difficulty in performing frequent hand, wrist, finger manipulations such as twisting, turning, fine grasping.

RECOMMENDATIONS: (To be initiated by referral source and Ms. Davis)

1. Consider participation in job seeking skills in either individual or group setting for development of current resume, correct completion of applications, and positive interviewing techniques, especially when speaking of disability.
2. Complete GED Pretest and return for scoring within two weeks. Scoring of pretest would identify whether Ms. Davis has likelihood of successfully passing a GED or if she requires further brush-up in any particular area of test.
3. Begin active job search through recent want ads, touring companies of interest areas, cold canvas, use of yellow pages, etc.
4. Avoid jobs requiring frequent finger manipulations such as twisting and turning, flipping of cards, grasping of fine and small objects. Although Ms. Davis has found ways to compensate for this to avoid aggravations to the hands and wrists, repetitive manipulations like this would most likely increase discomforts.
5. Avoid frequent overhead glancing such as when used to reach overhead. Discomforts were reported when performing this action; however, Ms. Davis stated they were alleviated when she finished working in this position.
6. Consider taking a course in typing, either PLATO training or home practice to obtain more skills which would open up more job opportunities. The goal is to obtain an approximate speed of 30 words per minute.

OCCUPATIONAL AREAS:

1. Ms. Davis would prefer to find employment on a full-time basis. Also to work as close to her home area as possible, if possible.
2. Job ideas could be directed to considering varied job duties, problem solving skills, utilize organizational ability, ability to work independently and accuracy. It is suggested that she avoid jobs requiring repetitive hand - wrist - finger manipulations and she requested she avoid jobs requiring concentrated arithmetic calculations.

SUGGESTIONS:

1. Mail Clerk (Dayton-Hudson's)
2. Order Clerk
3. Pharmacy Clerk
4. Information Clerk
5. Admitting Clerk
6. Hotel Desk Clerk
7. Hostess - Cashier

Vocational Evaluator

2. SIZE DISCRIMINATION: Valpar - Component Work Sample 2 measures a person's ability to perform work tasks requiring visual size discrimination. This work sample requires the ability and willingness - to follow instructions and measures spatial and form perception. It measures an - individual's accuracy and attention to detail, manual and fine finger dexterity, and eye-hand coordination. The work sample is designed to be administered to the client while standing. However, the sample can be completed in a sitting position by individuals with disabilities that prevent them from standing during the administration. It should be noted that this work sample requires extended forward and cross-over reaching.

PERFORMANCE: TIME 68%ile QUALITY 100%ile

BEHAVIORAL OBSERVATIONS:
Prior to beginning the work sample Ms. Davis indicated that her left hand was especially hurting her. When using her right hand individually she indicated that her two small fingers felt slightly numb and stiff. During the disassembly she was required to work with both hands simultaneously and indicated that she did find that she worked faster with her right than with her left. She indicated that her left hand hurt more so than her right.

3. NUMERCIAL SORTING: Valpar Component Work Sample 3 measures a person's ability to perform work sample tasks requiring the use of numbers and numerical series. It is designed to be administered to the client while standing; however, the sample can be completed while in a sitting position. This work sample requires the ability to work with fingers, speed and accuracy in computation, spatial and form perception, attention to detail and accuracy, manual and fine finger dexterity, and eye-hand coordination. It requires the client to perform extended, cross-over reaching (approximately 31") and forward reaching (approximately 23").

PERFORMANCE: TIME 128%ile QUALITY 150%ile

BEHAVIORAL OBSERVATIONS:
Ms. Davis showed no difficulties in grasping and holding the small tiles. She indicated no physical discomforts - in performing this task.

4. UPPER EXTREMITY RANGE OF MOTION: Valpar Component Work Sample 4 measures a person's upper extremity range of motion, including shoulder, upper arm, forearm, elbow, wrist and hand. The work sample is designed to give the evaluator insight into related factors such as neck and back fatigue, finger dexterity, and finger tactile sense. This work sample is designed to be administered to the client while standing; however, the sample can be completed while in a sitting position. The client's overall performance of, and physical response to the sample, are indicators of their ability to succeed in occupations in which upper extremity range of motion is an important factor. During this task, a client can be observed to assume several body positions including waist bending or twisting, leaning, upper extremity twisting or reaching.

RIGHT HAND _____ LEFT HAND _____ DISASSEMBLY _____

BEHAVIORAL OBSERVATIONS:

5. CLERICAL COMPREHENSION AND APTITUDE: The purpose of Valpar Component Work Sample 5 is twofold: 1) The work sample measures a person's ability to perform a variety of basic clerical tasks. It measures the client's ability to auditorally comprehend and accurately record telephone messages given rapidly and perceive differences and detail in mail sorting and alphabetical filing operations. It should be noted that the client is asked to sit while taking telephone messages in conjunction with standing while performing mail sorting. The mail sorting requires a minimal upper extremity reaching within close distances to the body. The alphabetical filing portion is performed while sitting and also includes message-taking.

	PERFORMANCE	QUALITY
Mail Sorting	70%ile	150%ile
Alphabetical Filing	95%ile	135%ile
Message Taking		75%ile

BEHAVIORAL OBSERVATIONS:
After completing this work sample Ms. Davis indicated that she found that she had no problems in writing, sitting or standing for the duration of this task. This work sample lasted approximately 30 minutes. She demonstrated above average skills in mail sorting and alphabetical filing. Her errors in telephone answering appeared to be those of omission of information rather than incorrect recording of information.

6. CLERICAL BOOKKEEPING: This work sample measures a person's ability to perform three types of bookkeeping tasks utilizing a 10-key adding machine. The task is performed in a sitting position. It requires clients to perform daily log sheets, disbursement ledgers, and fee schedules. Basic arithmetic (adding and subtracting) and minimal multiplication tables are necessary

PERFORMANCE TIME 103%ile QUALITY 125%ile

BEHAVIORAL OBSERVATIONS:
Ms. Davis worked on this task for approximately 30 minutes after which she received average to above average time and quality scores. She indicated no difficulties with her wrists, fingers, hands or neck.

7. INDEPENDENT PROBLEM SOLVING: Valpar Component Work Sample 6 measures a person's ability to perform work tasks requiring visual comparison and proper selection of a series of abstract designs. The purpose of the sample is to give a measure of a person's basic independent problem solving and judgemental decision making ability. This work sample was designed to be administered to a client while sitting. This task also requires using the dominant upper extremity to reach at waist level when making responses.

PERFORMANCE TIME 100%ile QUALITY 150%ile

BEHAVIORAL OBSERVATIONS:
After completing this task Ms. Davis indicated that her left fingers felt slightly numb; therefore, she had some difficulty in flipping the cards that were required on the task.

8. MULTI-LEVEL SORTING: Valpar Component Work Sample 7 measures a person's ability to make decisions while performing work tasks requiring physical manipulation and visual discrimination of colors, color-letters, color-numbers, and a combination of color-letter-numbers. It is designed to be administered to the client while sitting; however, it can be administered while in a standing position. This work sample requires extended forward reaching (approximately 27") and slight waist bending and twisting.

PERFORMANCE TIME 90%ile QUALITY 150%ile

BEHAVIORAL OBSERVATIONS:
Ms. Davis used her right hand to grasp small 1½ X ¼ X ¼" tiles. She was observed to occasionally drop these tiles when grasping. She indicated the same slight numbness to her fingertips as she had so before.

9. SIMULATED ASSEMBLY: Valpar Component Work Sample 9 measures a person's ability to work at an assembly task requiring repetitive, physical manipulation and evaluate the bilateral use of upper extremities. The work sample is characteristic of conveyor/assembly jobs in which material moves toward and away from the workers on the assembly line. It is designed to be administered to the client while standing; however, the work sample can be completed while sitting. The client's performance score is an indicator of the ability to become a successful worker in occupations requiring upper extremity, bilateral assembly skills for conveyor-type assembly occupations. It can also be used as a measure of an individual's stationary standing tolerance and manual/finger dexterities.

QUALITY 83%ile

BEHAVIORAL OBSERVATIONS:
Mrs. Davis stood for approximately 20 minutes to complete this task after which she indicated that her left hand and arm felt tingly, numb and ached.

10. WHOLE BODY RANGE OF MOTION: Valpar Component Work Sample 10 measures the agility of a person's gross body movements with the trunk, arms, hands, legs, and fingers as they relate to the functional ability to perform job tasks. The work sample is designed to give the evaluator an actuarial level of client's physical agility and to provide the evaluator with insight into the relationship of gross body movements to other "finger" manual dexterity in many differing work situations. It requires an individual to perform light assembly work overhead, approximately shoulder height, just below waist level, and at knee level, and maintain these positions for approximately 3-6 minutes. It should be noted that the height of the work sample is adjusted to the client's physical height. The overhead reaching requires the client to reach approximately 2'6" above the head.

PERFORMANCE TIME 110%ile

BEHAVIORAL OBSERVATIONS:
When working in the overhead position Ms. Davis indicated that she experienced a slight ache in the neck. However, she stated this subsided as soon as she stopped looking overhead. Ms. Davis was required to assemble and disassemble plates from a work board by turning pegs on and off a bolt. At first Ms. Davis was observed to twist with her hands; however, ultimately she was observed to roll these pegs between both hands. This appeared to be an attempt to avoid the frequent hand twisting.

11. TRI-LEVEL MEASUREMENT: Valpar Component Work Sample 11 measures a person's ability to perform very simple to very precise inspection and measurement tasks. This sample is designed so that the client is forced to make decisions which increase in their level of difficulty to determine if specially lathed, machined parts fit specific tolerances. The task also requires an individual to use the micrometer and caliper in determining standards and tolerances. This is a benchwork task and requires extended forward reaching (approximately 28") at waist level while in a sitting position.

PERFORMANCE TIME 110%ile QUALITY 150%ile

BEHAVIORAL OBSERVATIONS:
Ms. Davis was observed to have difficulty in manipulating the small precision tools of micrometer and calipers. It should be noted these tools require that finger twisting is required in order to operate them.

12. EYE-HAND-FOOT COORDINATION: Valpar Component Work Sample 12 measures a person's ability to uses eyes, hands and feet simultaneously and in a coordinated manner, according to visual stimuli and reaction times. The work sample is designed to be administered to the client while in a sitting position. It requires a steady evaluation of both upper extremities and lower extremity motion.

PERFORMANCE TIME 135%ile QUALITY 60%ile

BEHAVIORAL OBSERVATIONS:
Although Ms. Davis indicated no physical discomforts in performing this task she did have some difficulty in coordinating her hands and feet simultaneously to receive a higher score.

Vocational Development Center

The Vocational Development Center (VDC) of the Stout Vocational Rehabilitation Institute, University of Wisconsin-Stout was started in 1968 as a training and internship site for students in a masters degree program in vocational evaluation. The VDC presently operates a variety of programs designed to serve handicapped and, to some degree, disadvantaged persons in rural northwestern Wisconsin. The center has active programs in vocational evaluation, job seeking skills, job placement, a projects with industry program, and a large independent living project. In addition to student interns, the VDC has over 20 full-time professional staff and provides services to over 1,000 clients per year.

The vocational evaluation unit offers employment related services to clients from a variety of referral sources including Wisconsin Division of Vocational Rehabilitation (DVR), public schools, Veterans Administration, insurance companies, and attorneys. During the past year, the VDC began to offer a one week evaluation program which was aimed at two specific target groups: injured workers and DVR clients. For both groups of clients, the emphasis is upon assessing present employment potential followed by direct placement. Long-term training is usually not considered for the injured worker program and is often not considered for DVR clients. The evaluation for both groups of clients is aimed at evaluation and placement and not at the legal aspects. Thus, reports will make recommendations and suggestions, but do not contain estimates of loss of income or give a percentage of disability.

Prior to arriving at the VDC, each person in the injured worker program must have a physical capacity examination by a physician as well as an updated medical history. This service is provided through a cooperative agreement with a local clinic. In order to use evaluation tools that are within the client's physical limitations, the physical capacity examination results must be seen by the evaluator prior to planning. The following information is received on all DVR sponsored clients: application, general medical information, and the referral form (Figure 13) with specific referral questions. However, only half of the referrals contain specific questions to be answered.

Planning begins with the Vocational Evaluation Referral (Figure 13). The exact length of time needed to complete the evaluation depends upon the client's literacy skills and the type of referral questions. If the referral questions are fairly specific and if the client is fully literate, then the evaluation may be completed in as little as three days. In planning the evaluation, VDC staff try to use work samples having short administrative times and will try to combine two activities when possible. An example is testing a client's writing skills by having him/her prepare a resume. The VDC staff depend largely upon psychological tests and work samples to assess their clients. In a typical one week evaluation, three to four of the total 30 client contact hours are used for psychological testing. Most of the psychological testing is performed during the first day of evaluation. The evaluator takes each referral question and restates it as a hypothesis in the Evaluation Plan (Figure 14). Opposite the hypothesis, he/she records the procedures that will be used to test each hypothesis. The numbers before each work sample (e.g., 196 Business Letter) refer to an internal classification system used by the VDC. Usually the individual evaluation plans are prepared Monday afternoon or Tuesday morning after the initial interview, referral questions, client's goals, and counselor's goals are known.

The typical schedule for a one week evaluation is as follows:

Day/Time	Activity
Monday - A.M.	- Client tour and orientation; read participant's handbook
	- Evaluator completes initial paper work, i.e., release agreement and initial interview form
	- Administer Wide Range Achievement Test (WRAT)
A.M. and P.M.	- Evaluator alternates initial interview with interest testing. The Wide Range Interest-Opinion Test (WRIOT) or California Occupational Preference System - Inventory (COPS) are often used
P.M.	- Administer trait-and-factor work samples--dexterity and motor coordination assessed by Disc Assembly, Silo Ladder Assembly, Bridge Assembly, and Eye-Hand-Foot Coordination
Tuesday - A.M.	- Administer General Aptitude Test Battery (GATB). Computer score to: (1) obtain Occupational Aptitude Patterns (OAP), and (2) cross-reference OAP's with COPS results
P.M.	- Review GATB and OAP results with clients
Wednesday, Thursday and Friday - A.M.	- Based on individual evaluation plan, administration of work samples and some tests for assessment and/or vocational exploration. Use of occupational information systems
Friday - P.M.	- Staffing on each client, about 45 minutes each

The WRAT and GATB are usually given to all clients. The WRAT provides a quick, yet accurate measure of client literacy while the GATB is used to measure basic vocational aptitudes that exist in almost all occupations. The amount of interest testing depends upon the referral questions. Basic finger and manual dexterity and motor coordination are assessed by several possible work samples: Silo Ladder Assembly, Bridge Assembly, Upper Extremity Range of Motion, and Disc Assembly.

At the staffing for each client, the preliminary results and tentative plans are presented to the client's counselor, insurance representative, case manager, etc. Together with the client and other staff, the options are considered. Figure 15 is the staffing report as it was completed for Ms. Smith.

The final part of the evaluation is the preparation of the Work Evaluation Report (Figure 16). The VDC format uses summary sheet as a first page. The narrative report contains sections on the referral reason, general description, immediate recommendations and long-term recommendations. Attached to this narrative report are sections on work behavior, psychological test

results, work sample results, work temperaments, work interests, work activities, working conditions and physical capacities. While this general format is used for all clients, the reports prepared for injured workers contain more detailed information on employment history and physical performance factors.

VOCATIONAL DEVELOPMENT CENTER
Stout Vocational Rehabilitation Institute
University of Wisconsin-Stout
Menomonie, Wisconsin 54751

Vocational Evaluation Referral

Client: Joan Smith **Counselor:** Sue White

Disability: Depression - presently in remission

Counselor impression of functional limitations: Has training as radiology technician but does not wish to pursue this career

Tentative vocational goals: Work more directly with people, perhaps use medical training, such as dental technician, L.P.N., or ward clerk

Priority should be given in this evaluation to: (please check one)

__X__ **Career Exploration**

_____ **Formal Training Feasibility**

__X__ **Identification of Immediate Employment Possibilities**

Specific questions to be addressed include:

1. Short-term vocational training vs. college

2. Define her job satisfaction needs

3. Job outlook for Eau Claire area jobs

Figure 13

VOCATIONAL DEVELOPMENT CENTER
Evaluation Plan

Date: _____

Client: Joan Smith Evaluator: Diane Iverson

Hypothesis	Procedure
What are feasible short-term training areas vs. college appropriate for her present situation?	11 Pharmacy Helper 12 Newspaper Classifier 43 Precision Weighing 47 Desk Calculator 50 Sorting Inc. Mail 122 Visual Pursuit 125 Mech. Assembly
What are Ms. Smith's job satisfaction needs?	ABLE III COPS - California Occupational Preference System Inventory GATB - WCIS Career Exploration 16 PF - Personality Factor Inventory GATB - COPS Profile through Computer sort program
What is the outlook regarding jobs in the Eau Claire area? What job areas are realistic to consider?	157 Road Map Reading 191 Business Math 193 Sales Book 195 Record Keeping 196 Business letter
Would Ms. Smith be capable of handling related medical training? (i.e., dental, LPN, ward clerk)	210 Blueprint Reading 244 Numerical Sorting 247 Indep. Problem Solving 248 Multi Level Sort Career Corner - investigate voc-tech requirements and courses

Figure 14

Vocational Development Center

STAFFING REPORT

NAME Joan Smith DATE 4-9-82

COUNSELOR Sue White EVALUATOR Diane Iverson

DVR

Achievement Testing:

W.R.A.T. (4-5-82)
Reading 12.9 GR 98%ile
Spelling 11.9 GR 98%ile
Arith. 7.6 GR 58%ile

ABLE III (Voc-Tech Norms)
Vocabulary 98%ile
Arith. Comp. 62%ile
Arith. P.S. 97%ile
Arith. Total 82%ile

WAIS V____ P____ FS____

GATB G 124 K 107
V 119 F 32
N 120 M 96

S 110
P 87
Q 141 All H - OPA's

Interests and Goals (expressed and tested):

Expressed: job with variety of duties
Tested: Science; Technology; Outdoor

High Areas of Performance (occupational categories):

Clerical; Technical; Benchwork

Vocational Assets

- academic, aptitude levels
- attendance, punctuality
- work organization
- overall work quality and performance
- attention span
- work independently
- follow instructions
- reaction to supervision
- co-worker interaction

Vocational Limitations

- depression
- lack of self-confidence; overly critical of self
- consideration of Ms. Smith's individual vocational needs

Figure 15

Special Considerations:

- for realistic planning within Ms. Smith's personal needs and stress tolerance.

RECOMMENDATIONS:

Immediate

(1) Vocational Counseling:
- importance of Ms. Smith pursuing occupations which will fit her personal needs
- cope with "pressure" from significant others
- step-by-step goal setting

(2) Make application to District One Technical Institute:
- financial aides
- contact dept. chairperson
- waiver of med. terminology course
- ward clerk training (Jan. 83)

Long Term

(1) Ward Clerk Training

- OR -

(2) Placement Assistance
- Hospital Admissions Clerk
  a. Medical clerical background
  b. good clerical skills, with medical terminology helpful
- Clerical Receptionist General bookkeeping; professional office setting

- OR -

(3) Consider/investigate:
  a. Medical Record Technician Training: 2 yr., Associate Degree
  b. possibility of college education

Client's Reaction to Plan:

see attached sheet

- possibility of Job Experience Training and ERT

Should contact next week

Evaluator **Supervisor**

STOUT VOCATIONAL REHABILITATION INSTITUTE
Vocational Development Center
University of Wisconsin - Stout
Work Evaluation Report

Date: April 14, 1982 Name: Joan Smith

Counselor: Sue White I.D. Number:

Referral Agency: Division of Vocational Rehabilitation, La Crosse, Wisconsin Address: P.O. Box 692 Boyceville, WI 54728

Evaluation Period: 4/5/82 to 4/9/82 Evaluator: Diane Iverson

Background/Demographic Data

PHYSICAL:
Sex: F Age: 27

Birthdate: 11/15/54

Height: 5'9" Weight: 150

Use of aids: Yes ___ No X
Type

Hearing:
Vision:
Mobility:

SOCIAL:
Marital Status:

Presently Living:
Parents . . . ___
Spouse X
Friends . . . ___
Alone . . . . ___
Other . . . . ___

Driver's License:
Yes X
No ___

EDUCATIONAL:
Last Grade Completed: 14

Voc/Tech Training:
Yes X No ___ If Yes, Radiologic Technology Graduate

On-The-Job Training:
Yes ___ No X If Yes,

College: None

VOCATIONAL: Usual or typical line of work

Professional/Technical/Managerial . . ___
Clerical and Sales X
Service . . . . . ___
Farming/Fishing/Forestry . . . . . ___
Processing . . . . . ___
Machine Trades . . . . . ___
Bench Work X
Structural . . . . . ___
Miscellaneous . . . . . ___

Work History:
___ Never Worked
___ 1 Job
___ 2 Jobs
___ 3 Jobs
X 4+ Jobs

Generally Jobs Were:

___ Part-Time
X Entry Level
___ Supervisory
X Full-Time
___ Short-Term
X Long-Term

DISABILITY CHARACTERISTICS: As found in referral information

___ Sensory impairment (visual/hearing)
___ Orthopedic deformity or functional impairment, except amputations
___ Absence or amputation of major and/or minor members
___ Neurologic disorders
X Mental illness (psychosis/neurosis)
___ Mental retardation
___ Chemical dependency (alcoholism/drug addiction)
___ Behavioral disorder
___ Socio-cultural disadvantagement
___ Other

Figure 16

I. Referral Reason:

Ms. Joan Smith was referred to the Vocational Development Center for a one week work evaluation by the Division of Vocational Rehabilitation. Specific questions to be addressed during the evaluation included:

"- Short term education vs. college.
- Job satisfaction needs.
- Outlook for the Eau Claire area regarding jobs."

Counselor's impression of the client's functional limitations included the "need for vocational goal direction and tentative vocational goals included her wish for people involvement/perhaps something that would use her prior medical knowledge." Disability indicated was depression, in remission.

II. General Description:

Ms. Smith presented herself as an attractive, friendly, 27 year old female. During the initial interview, she indicated she had graduated from St. Margaret's Hospital School of Radiologic Technology in La Crosse in 1978. She stated she did not like x-ray work and had never worked at this occupation. She indicated it was an "assembly line" type employment. Ms. Smith stated she was looking for a job which entailed typing, spelling, light bookkeeping, and work that involved medical terminology or some medical knowledge. She further indicated that she did not want a job if it was "meaningless to me, maybe something medical or clerical would be enjoyable." She was married and resided with her spouse, their two year old son, and a sister in Boyceville. Past work history included employment as a Secretary, Cashier, and Assembly Worker. These jobs were typically full-time, long term. At the time of evaluation, she was taking Lithium medication, three times daily, for depression.

Work was generally completed in average (26-75%ile) to above average time and in above average quality. Tested interests included Science, Technology, and Outdoor areas. High areas of performance observed during the evaluation were in the Clerical, Technical, and Bench Work occupational categories. Good concentration was noted on all tasks, and Ms. Smith exhibited the determination to do her best on all samples and psychometric tests.

General attitude during the evaluation was cooperative and she exhibited a desire to determine the most feasible vocational alternatives. Observed vocational assets during the evaluation were:

- Academic and aptitude levels
- Attendance and punctuality
- Work organization
- Overall work quality and performance
- Attention span
- Working independently
- Following all instructions
- Reaction to supervision
- Co-worker interaction

Vocationally limiting factors included a long history of depression, a low self-confidence, and being overly critical of herself and the need to consider her own individual vocational needs in the future.

III. Recommendations:

The following recommendations are offered in view of evaluation results. They were discussed with Ms. Smith and Ms. Sue White, DVR counselor, at the 4/9/82 staffing.

A. Immediate Recommendations:

1. Vocational counseling.

The importance of Ms. Smith pursuing an occupation which would fit her personal vocational needs was discussed throughout the evaluation and during the staffing. She reported feelings of difficulty accepting her limitations regarding vocational needs and her lowered stress tolerance. She indicated a feeling of "pressure" from significant others in her family regarding having not "lived up" to her capabilities. Discussion of a step-by-step goal setting process was initiated for realistic planning within her personal needs.

2. District I Technical Institute.

It was suggested that Ms. Smith make application to District I Technical Institute and file for financial aids. Ward Clerk training was investigated with an opening in January of 1983. With consideration of her X-ray Technician background, a waiver of the Medical Terminology course would be permitted. Ms. Smith could contact the department chairperson and discuss the possibilities of this program. With the course opening in January, 1983, sufficient time would be allowed for further decision making and preparation for training.

3. Job experience training.

During the evaluation staffing, the possibility of Employment Readiness Training and Job Experience Training was discussed. In view of her expressed desire to actively continue with rehabilitation planning, this unpaid work experience could provide needed positive reinforcement and exposure to a full-time work environment. Suggested areas of possible employment included that of a receptionist or insurance clerk within a medical setting.

B. Long Term Recommendations:

1. Ward Clerk training, January, 1983.

OR

2. Placement assistance.

Ms. Smith's work skills and academic and aptitude levels indicated she would be capable of full-time, competitive employment. Possibilities for investigation included:

a. Hospital Admissions Clerk.
   1) Medical/clerical background important.
   2) Good clerical skills with medical terminology was considered helpful for this occupation.

b. Clerical/Receptionist.
   She possessed the necessary general bookkeeping skills and would be an asset to a professional office setting. Suggestions in this area included employment in a doctor's or dentist's office.

OR

3. Further vocational exploration.

   a. Medical Records Technician training; two year associate degree.
   b. Investigate the possibility of a college education.

In summary, behaviors and performance observed during the evaluation suggested success with rehabilitation planning. However, special consideration would need to be given to her history of depression and fears regarding vocational planning.

Diane Iverson
Vocational Evaluator

st

Vocational Development Center

WORK BEHAVIOR RATING FORM

Name:_____ Page 5 of 12

Key

A - Vocational Asset L - Vocational Limitation
U - Not Observed NA - Not Applicable

Behavior Factors	Rating			
1. Personal Appearance	A	U	L	NA
Hygiene	X			
Grooming	X			
Dress	X			
2. Conformity to Rules and Regulations at Work	A	U	L	NA
Attendance	X			
Punctuality	X			
Notification given when absent/late				X
Responsibility for assigned projects	X			
3. Conformity to Rules and Regulations at Dorm	A	U	L	NA
General behavior				X
Curfew rules followed				X
4. Reactions to Assigned Work	A	U	L	NA
Reaction to distractions	X			
Attention span	X			
Reaction to unpleasant or repetitive tasks	X			
Frustration tolerance	X			
Number of personal complaints	X			
Staying with work assignment	X			

WORK BEHAVIOR RATING FORM

(continued)

Name:_____ Page 6 of 12

Key

A - Vocational Asset L - Vocational Limitation
U - Not Observed NA - Not Applicable

Behavior Factors	Rating			
5. Interpersonal Traits	A	U	L	NA
Cooperation with staff	X			
Reaction to close supervision	X			
Reaction to suggestions or constructive criticism	X			
Reaction to pressure from supervisor	X			
Request for assistance when necessary	X			
Appropriate questions asked	X			
Co-worker interaction	X			
6. Initiative Factors	A	U	L	NA
Working without supervision	X			
Amount of supervision required after initial orientation to task	X			
Independent return to work after breaks	X			
Recognition of errors	X			
Correction of errors	X			
Maintenance of orderly work area	X			
7. Other	A	U	L	NA
	X			
	X			
			X	

Comments:

VDC 201 B

Vocational Development Center

PSYCHOMETRIC TEST APPENDIX SHEET

Name:_____ Page 7 of 12

A. Psychometric Tests:

Interest

A California Occupational Preference System

	Raw Score	%ile	
Science (Professional)	25	92	
Science (Skilled)	14	75	
Technology (Professional)	9	70	High School Norms
Technology (Skilled)	11	80	
Consumer Economics	16	65	
Outdoor	18	75	
Business (Professional)	12	60	
Business (Skilled)	14	65	
Clerical	11	20	
Communication	14	55	
Arts (Professional)	12	25	
Arts (Skilled)	14	30	
Service (Professional)	22	60	
Service (Skilled)	19	45	

____ Interest Check List

____ Kuder Preference Record-Vocational-Form CP

	Raw Score	%ile
0-Outdoor	____	____
1-Mechanical	____	____
2-Computational	____	____
3-Scientific	____	____
4-Persuasive	____	____
5-Artistic	____	____
6-Literary	____	____
7-Musical	____	____
8-Social Service	____	____
9-Clerical	____	____

V-Score _____

Vocational Development Center

PSYCHOMETRIC TEST APPENDIX SHEET

Name:_____

Achievement

B Adult Basic Learning Exam III

	Score	%ile	Stanine	
Vocabulary	57	92	8	Grade 12 norms
		98	9	Voc. Tech. norms
Spelling	____	____	____	Grade 12 norms
		____	____	Voc. Tech. norms
Reading	____	____	____	Grade 12 norms
		____	____	Voc. Tech. norms
Arithmetic Computation	28	32	4	Grade 12 norms
		62	6	Voc. Tech. norms
Arithmetic Problem Solving	38	90	8	Grade 12 norms
		97	9	Voc. Tech. norms
Arithmetic Total	66	52	5	Grade 12 norms
		82	7	Voc. Tech. norms

Comments: Vocational technical students in _____ comprised the second norm group used.

C Wide Range Achievement Test

	Grade	%ile	Standard Score	
Reading	12.9	98	130	
Spelling	11.9	92	121	Norms: Age 25-34
Arithmetic	7.6	58	103	

Vocational Development Center

PSYCHOMETRIC TEST APPENDIX SHEET

Name:_____

Aptitude

____ Bennett Mechanical Comprehension Test (Form ___)

Comments:

%ile_____ Norm Group:_____

_____

%ile_____ Norm Group:_____

_____

D General Aptitude Test Battery

	Apt. Sc.	1 SEM	+1 SEM
G--General Learning	124	6	130
V--Verbal	119	6	125
N--Numerical	120	6	126
S--Spatial Perception	110	8	118
P--Form Perception	87	9	96
Q--Clerical Perception	141	9	150
K--Motor Coordination	107	7	114
F--Finger Dexterity	82	12	94
M--Manual Dexterity	96	11	107

All OAP's qualify = H

____ Minnesota Spatial Relations Test

%ile_____ Norm Group:_____

VDC 132

B. Work Samples:

UW-STOUT WORK SAMPLES

Professional, Technical, and Managerial
11. Pharmacy Helper
12. Newspaper Classifier

Clerical and Sales
43. Precision Weighing
47. Desk Calculator-Revised
50. Sorting Incoming Mail
56. Typist

Machine Trades
94. Mechanical Assembly

Bench Work
122. Visual Pursuit
125. Mechanical Aptitude

TOWER WORK SAMPLES

Clerical
193. No. 5 Sales Book
195. No. 6 Record Keeping

VALPAR COMPONENT
WORK SAMPLE SERIES

247. No. 6 Independent Problem Solving

SPECIAL PROJECTS

Miscellaneous
304. WCIS - GATB Career Exploration

C. Work Temperaments: The client is capable of performing in work situations described below. Ratings are the result of observations of work performance and discussions with the client concerning his/her work. (U indicates factor was unobserved.)

	WORK TEMPERAMENTS	YES	NO	U
1.	A variety of duties often characterized by frequent change.	X		
2.	Repetitive or short cycle operations carried out according to set procedures or sequences.		X	
3.	Doing things under specific instruction, with little room for independent action or judgment in solving job problems.		X	
4.	Direction, control, and planning of an entire activity or the activities of others (e.g., a supervisor).	X		
5.	Dealing with people in job duties beyond just giving and receiving instructions (e.g., a foreman, counselor, secretary).	X		
6.	Working alone and apart in physical isolation from others, although the job may be integrated with that of others.		X	
7.	Influencing people in their opinions, attitudes, or judgments about ideas or things.	X		
8.	Performing adequately under stress when faced with the critical or unexpected, or taking risks.		X	
9.	Making judgments and decisions on the basis of sensory criteria (e.g., taste) or on the basis of one's interpretation of feelings, ideas, facts, data, laws, etc. (X)	X		
10.	Making judgments and decisions on the basis of objective criteria (e.g., physical measurements) or working to set limits, tolerances, or standards. (Y)	X		

D. Vocational Interests: Clients' stated vocational/avocational interests were as follows: "job with a variety of duties."

Tested interests ( ), ( ), ( ) revealed Science; Technical; Outdoor.

E. Work Activities: The client exhibited a preference toward working with the following activities during the evaluation period.

	WORK ACTIVITIES	YES	NO	U
1.	Activities involving things and objects.		X	
2.	Activities involving business contact with people.	X		
3.	Routine, concrete, organized activities.	X		
4.	Working for the good of people (as in social welfare), or dealing with people and language in social situations.	X		
5.	Increasing his prestige or obtaining the esteem of others.	X		
6.	Activities involving people and the communication of ideas.	X		
7.	Scientific or technical activities.	X		
8.	Abstract or creative activities.	X		
9.	Non-social activities using processes, machines, techniques.		X	
10.	Activities resulting in tangible, productive satisfaction.	X		

F. Working Conditions: The client is capable of working under the following conditions.

WORK CONDITIONS	YES	NO	U
1. Inside (indoors)	X		
2. Outside (outdoors)			X
3. Extremes of cold plus temperature changes.			X
4. Extremes of heat plus temperature changes.			X
5. Wet and humid (extremes)			X
6. Noise and vibration (extremes)			X
7. Hazards, (mechanical, electrical, heights, etc.)			X
8. Fumes, odors, toxic conditions, dust, poor ventilation discomforts effecting respiratory system.			X

G. Physical Capacities: The client should be capable of performing the following physical activities on a job.

PHYSICAL DEMANDS	YES	NO	U
1. Lifting, carrying, pushing, pulling (strength):			
. Sedentary work (lift max. of 10 lbs.; mostly sitting)	X		
. Light work (lift max. of 20 lbs.; or much walking or standing; or many work movements while sitting)	X		
. Medium work (lift max. of 50 lbs., often carry up to 25 lbs., and many work movements while sitting)			X
. Heavy work (lift max. of 100 lbs., often carry up to 80 lbs.)			X
. Very heavy work (lift over 100 lbs., often carry up to 80 lbs.)			X
2. Climbing (agility); balancing (equilibrium)			
. Stooping, kneeling, crouching, crawling (use of lower extremities and back muscles)	X		
. Reaching, handling, fingering, feeling (use of upper extremities)	X		
3. Talking and hearing (as required on the job)	X		
4. Seeing (eyesight adequate for safety and for accuracy)	X		

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APPENDICES

Appendix A

Date _____

Time _____

Initial Interview Information

Name _____ Birthdate _____

Address _____

_____

Phone Number (____) _____ Social Security Number _____

Height _____ Weight _____ Age _____ Sex _____

Personal History

Place of Birth _____

Father's Occupation _____ _____ Mother's Occupation _____

Number of Brothers _____ _____ Number of Sisters _____

Family Health (medical problems of parents and siblings - causes of death and age at death for any deceased family members) _____

_____

_____

_____

Age when left family home _____ Reason: _____

Marital Status _____ Date of Marriage _____

Family Members Living With You:

Name	Relationship	Age	Name	Relationship	Age
Name	Relationship	Age	Name	Relationship	Age
Name	Relationship	Age	Name	Relationship	Age

Living Arrangements: Own Home _____ Amount Per Month _____

Rent Home _____ Amount Per Month _____

Rent Apartment _____ Amount Per Month _____

Share Apartment _____ Amount Per Month _____

Other _____ Amount Per Month _____

Present Monthly Income:

Self - wages/salary _____ Worker's Compensation _____

SSDI _____ AFDC _____ Food Stamps _____

Interest _____

Spouse (give sources and amounts) _____

_____

Debts: Home Mortage Remaining _____

Car/truck Loan(s) Remaining _____

Credit Cards _____

_____

Personal Loans _____

_____

Other _____

_____

SSDI - Date of Application _____ Current Status _____

Worker's Compensation - Date of Injury _____ Current Status _____

Comments: _____

_____

_____

_____

_____

Educational History

	School Attended	Dates Attended	Grades - Courses
Grade School			
High School			
Vocational School			
Business College			
Jr. College			
College			
Grad School			
Other			

Apprenticeships _____ Dates _____

Number of Classroom Hours _____

Have you attended any workshops, seminars, on-the-job training, company sponsored training courses, conferences, promotional courses, group/individual courses or classes of any kind? _____ What kind? _____

_____

_____

Do you hold any licenses, certificates, permits, authorizations, etc., other than a valid driver's license? _____ If so, what kind? _____

_____

Level of Literacy Skills

Reading _____ What Type of Material Read _____

How Frequently _____

Writing _____ Write Letters _____ Shopping Lists _____

Arithmetic _____ Balance Checkbook _____ Complete Income Tax _____

Comments: _____

_____

_____

_____

Employment History

Military Background

Branch _____ Dates of Service _____

Service Schools Attended _____

M.O.S. _____ What Did You Do _____

_____

Rank At Discharge _____ Type of Discharge _____

Service Connected Disability _____ What _____

_____

Past Employment

Company _____ Dates _____ Job Title _____

Job Tasks _____

_____

_____

Physical Demands _____

Final Salary _____ Reason For Leaving _____

Company _____ Dates _____ Job Title _____

Job Tasks _____

_____

_____

Physical Demands _____

Final Salary _____ Reason For Leaving _____

Company _____ Dates _____ Job Title _____

Job Tasks _____

_____

_____

Physical Demands _____

Final Salary _____ Reason For Leaving _____

Company _____ Dates _____ Job Title _____

Job Tasks _____

_____

_____

Physical Demands _____

Final Salary _____ Reason For Leaving _____

Company _____ Dates _____ Job Title _____

Job Tasks _____

_____

_____

Physical Demands _____

Final Salary _____ Reason For Leaving _____

Company _____ Dates _____ Job Title _____

Job Tasks _____

_____

_____

Physical Demands _____

Final Salary _____ Reason For Leaving _____

Present Employment

Are You Working Now _____ Company _____

Date Started _____ Job Title _____ Hours Per Week _____

Job Tasks _____

_____

_____

Physical Demands _____

Salary _____

Comments: _____

_____

_____

_____

Medical History

Family Physician's Name _____

Address _____

Serious Childhood Illness or Injuries _____

_____

_____

What injury/accident/illness did you have that caused your present disability?

Date _____ Where _____ Describe How Occurred _____

_____

_____

Describe Injury _____

_____

Treating Physician _____

Hospitalizations (Nonsurgical)

Dates _____ Where _____

Reason _____

Treating Physician _____

Dates _____ Where _____

Reason _____

Treating Physician _____

Dates _____ Where _____

Reason _____

Treating Physician _____

Dates _____ Where _____

Reason _____

Treating Physician _____

Surgery

Dates_____ Where _____

What Kind _____

Treating Physician _____

Dates _____ Where _____

What Kind _____

Treating Physician _____

Dates _____ Where _____

What Kind _____

Treating Physician _____

Psychological/Psychiatric/Counseling

Dates _____ Where _____

Reason _____

Treating Professional _____

Dates _____ Where _____

Reason _____

Treating Professional _____

Are you presently being treated for any condition?

What _____

Treating Physician _____

Do you use any medically prescribed assistive aid (e.g., cane, braces, hearing aid)?

_____

_____

Presently Taking Prescription Medication

Date Prescribed	Name of Drug	Dosage	Physician	Purpose of Drug

Has your physician placed any restrictions on your activities (e.g., lifting, driving, walking)?

Physician _____ Restriction _____

Physician _____ Restriction _____

Comments: _____

_____

_____

_____

_____

Present Activities

Sleeping Habits: Time to Bed _____ Time Get Up _____

Get Up At Night _____ How Often _____ Reason _____

_____

Activities performed inside home (e.g., cook, cleaning) _____

_____

_____

_____

Activities performed outside home (e.g., cut grass, garden, automobile maintenance)

_____

_____

_____

Present hobbies or sports (e.g., reading, crafts) _____

_____

_____

Previous activities that can no longer be performed (e.g., bowling, hunting) _____

_____

_____

Present social activities (e.g., religious, lodge) _____

_____

_____

Self-Description of Medical Problems

Part of Body	Description of Problem, if any
Head	
Neck	
Shoulders	
Arms	
Hands	
Fingers	
Chest	
Upper Back	
Lower Back	
Hips	
Legs	
Ankles	
Feet	
Other	

Self-Description of Physical Capacities

Activity	Reason for Restriction
Sitting - how long _____ min./hrs.	
Standing - how long _____ min./hrs.	
Walking - how long _____ min./hrs.	
- how far _____ min./hrs.	
Driving - how long _____ min./hrs.	

Lifting - floor level - how much _____ lbs.

- how often _____ hr./day

table level - how much _____ lbs.

- how often _____ hr./day

Carrying - how much _____ lbs.

- how often _____ hr./day

- how far _____ feet

Bending - how far _____ degrees

- how often _____ hr./day

Reaching - front - how often _____ hr./day

- overhead - how often _____ hr./day

Manipulation with hands/fingers

Other _____

Do you smoke? _____ How much? _____ Do you drink alcohol? _____

How much? _____ Do you have a driver's license? _____ Has it ever been revoked? _____ Suspended? _____ Restrictions? _____

Removed for any reason? _____ Explain any "yes" answers _____

_____

_____

Comments _____

_____

_____

_____

_____

Appendix B

Planning - Case Study

Vocational Evaluation Referral

Client: Ralph J. Andersen Counselor: John C. Nelson

Disability: Low back pain with some loss of motion. Possible chemical dependency/personality disorder

Counselor Impression of Functional Limitations: Moderate

Tentative Vocational Goals: Client undecided as to what job areas, but stresses the need for direct placement

Specific Questions to be Addressed Include:

1. Explore job opportunities
2. Assess client to provide direct placement
3. Check out personality problems

Comments:

Mr. Andersen indicated that he does not do well academically and I believe is not too interested in formal training; however, this can be pursued with him. He seemed to be angry and embarrassed about his poor academic ability. He has recently settled a worker's compensation case against his former employer and was awarded a 30% permanent partial disability; he is bitter over this decision and over the fact that the monthly payment is no where near what he expected. I believe that the reality of his situation has hit him very hard and that he now realizes that he must work to help support his family. He seems to have functioned marginally until his accident and may need some long-term support of some type.

Enclosed are copies of the most relevant medical reports and the notes on my initial interview with Mr. Andersen.

John

John C. Nelson
November 15, 1982

November 1, 1982

Referral Information On:

Ralph J. Andersen
49 East Roosevelt Avenue
Chippewa Falls, WI 54749

Date of Birth: June 13, 1940; present age - 42

Personal History: He was born and raised on a 200 acre farm near Gordon, Wisconsin. His father was a dairy farmer and a part-time pulp wood cutter; his mother was a full-time homemaker. Both parents are alive and in good health. He is the oldest of four children and has two brothers and one sister. No family health problems were reported.

He was married on April 10, 1961, to Jodi Stankowski; his wife has been employed for the last five years as a packaging machine operator at ARCO Plastics; she earns $4.75 per hour. They have two children: Edith (age 17, born April 21, 1965) and Nicholas (born August 29, 1970, age 12).

The family lives in an older frame house in Chippewa Falls on which there is a $12,050 mortgage; monthly mortgage payments are $156.00. They have no other debts.

Educational History:

1957 - Gordon High School, Gordon, WI - He completed 11 grades before dropping out at the end of his Junior year. He took courses in English, social studies, two years of machine shop, 2 years of automobile shop, and 3 years of vocational agriculture.

He has no other education. He claims limited arithmetic skills and describes himself as a "poor reader."

Employment History:

1957-1960 - Farmer, Gordon, Wisconsin. For three years he worked with his father on the family farm raising corn, soy beans, and hay. He cared for and milked about 45 dairy cows. He operated various types of farm machinery to perform field work and performed routine maintenance and repairs on equipment. However, he performed no record keeping functions and made no management decisions.

In the winter he and his father cut pulp under contract to a local paper mill. He operated a skidder, chain saw, and a truck with a loader.

1961-1965 - Wisconsin Central Railroad, Chippewa Falls, Wisconsin. He was employed for five years as a section gang worker on tracks between Chippewa Falls and Abbotsford, Wisconsin. Under the direction of the foreman, he was part of a six-man crew which

repaired and replaced track and turnouts. He operated portable grinders, spike pullers, and tie pullers to remove old ties, fish plates, and rails. Ties and rails were replaced and re-spiked; this occupation involved the operation of much heavy, specialized equipment as well as exposure to all types of weather. Final salary - $5.50 per hour.

1965-April 20, 1980 - Northern Wisconsin Trucking, Eau Claire, Wisconsin. For 15 years he drove a semi-truck to transport gasoline, fuel oil, and diesel fuel from a pipeline terminal to various gasoline stations and fuel oil distributors. He worked within a 200 mile radius of Eau Claire and was rarely gone overnight. After driving the truck to the filling rack, he pumped prescribed quantities into the tanks, checked meters and recorded the amounts loaded. After driving the semi-truck to the customer's site, he connected hoses to deliver the liquids. He gave a ticket of the amount to the customer. The job required climbing on top of the tank truck, bending, lifting, and dragging of hoses up to 20 feet, weighing over 100 lbs.

Bruce C. Nordstrom
Orthopedic Clinic, LTD
121 Second Street
Eau Claire, Wisconsin 54701

May 19, 1982

Ms. Claudia S. Dahl
Attorney at Law
Schofield, Feldman,
Schultz and Dahl
P.O. Box 6891
Eau Claire, WI 54701

Re: Ralph J. Andersen
Your File #0018-90

Dear Attorney Dahl:

Mr. Andersen was referred to me by Dr. Jones of Chippewa Falls for the treatment of low back pain. His history is chronic in that he had been to the Fort Snelling VA Hospital on five occasions and had also consulted with Dr. Joyce Lund at Duluth on April 10, 1979, because of low back pain, which had a gradual onset over the past five years. Prolonged sitting, as required by his occupation of truck driver, made his back symptoms worse. The VA hospital recommended an aspirin-type medication for pain in March, 1979, but this caused gastrointestional problems, so he had to stop this medication. He stopped truck driving because of severe back pain from February to August, 1979, but returned to work until April 20, 1980, when he quit because of a bladder infection.

He stated that swimming helps relieve the pain and the he can drive 50 miles to his hunting cabin. My examination on July 31, 1980, revealed a good range of back mobility with intact reflexes and straight-leg raising. There was, however, a congenital shortness of the right leg of 1/2 inch. A heel lift was suggested. He was reexamined on August 19, 1980, and at that time he stated he got no benefit from the heel lift.

He received two operations for his lower back at St. Olaf Hospital in Altoona by Dr. George Fascinno. The first was a laminectomy at L4-L5 in January, 1981. The second surgery was an L5-S1 fusion with a refusion of the L4-L5 in August, 1981. He now states that he feels "worse now then before the first operation." When seen on March 8, 1982, the examination revealed a considerable restriction of back mobility; he can only flex 45 to 50 degrees and had a very slow, dysrhythmic rise to the erect position. There was no evidence of sciatica.

He has also reported increased alcohol intake during the past two years and has frequently mixed beer with Phenaphen #3, which were prescribed for the relief of low back pain.

My major diagnosis is post-laminectomy syndrome; there is pain and spasm with restricted mobility of the back. The spinal disability is about 30% and is regarded as permanent. The secondary diagnosis is possible alcohol/drug dependency with personality disorder. The patient's irritable, restless nature and present spinal disability does not indicate that any type of work is feasible.

Attached are photocopies of my clinical notes. If you have any questions, please write.

B. C. Nordstrom, M.D.

Bruce C. Nordstrom, M.D.

WC-16-B

Practitioner's Report on Accident or Industrial Disease in Lieu of Testimony

1. Name: Ralph J. Andersen

2. Employer: Northern Wisconsin Trucking, Eau Claire, Wisconsin

3. Date of Accident or First Illness: February 2, 1979

4. State in patient's own words the accident or work exposure to which he attributes the condition for which he saw you:

   Mr. Andersen was examined by Dr. Jones in April, 1979. Mr. Andersen stated that for five years he had noticed gradual increasing onset of low back pain without any history of a specific injury. In the past two months this pain has become increasingly severe and disabling; he has a marked amount of pain when sitting. Mr. Andersen is employed as a truck driver and reached the point on February 2, 1979, when he "just couldn't take it (the pain) any longer." He described no radiation of pain, no leg pain and is not particularly aggravated by walking, bending, or lifting. He was off work from February 2 to August, 1979; he returned to work in September, 1979, and worked until April 20, 1980.

5. Give complete account of the nature and extent of disability:

   When he was seen by me on December 6, 1980, the situation was a patient with a two-year history of chronic low back pain without any radiation. This was verified on several occasions. Based on a review of X-rays, he probably had a spondylolysis; the problem is, however, one of mechanical back pain. He received no relief from the pain and had missed work for about six months in 1979; he has not worked since April, 1980. He was felt to have been a good candidate for a fusion from L-4 to the sacrum.

6. Did you treat patient: Yes

7. Date of last examination: April 15, 1981

8. Date disability from work began: December 15, 1980

9. Date injured was or will be able to return to a limited type of work: Unknown

0. Estimate-percentage of disability: 15% if he gets a solid fusion.

B. C. Nordstrom, M.D.

Bruce C. Nordstrom, M.D.
May 2, 1980

Bruce C. Nordstrom
Orthopedic Clinic, LTD
121 Second Street
Eau Claire, Wisconsin 54701

March 19, 1982

Ms. Claudia S. Dahl
Attorney at Law
Schofield, Feldman,
Schultz and Dahl
P.O. Box 6891
Eau Claire, WI 54701

Re: Ralph J. Andersen

Dear Attorney Dahl:

Mr. Andersen was seen and examined in my office on March 8, 1982, not having been seen since July 31, 1980. I do not have any reports, beyond the patient's statement of September 2, 1980, the handwritten one you sent. I was somewhat surprised to learn that he had been operated, in the interval since I have seen him in 1980. He had precisely inquired of my opinion at that time and I did not feel that surgery offered him any benefits.

The problem appears to be a degenerative arthritic one, rather than industrial trauma. Could I please have the data you have from various treatment sources to guide me in my analysis?

Yours sincerely,

B. C. Nordstrom, M.D.

Bruce C. Nordstrom, M.D.

Appendix C - Some Appropriate Tests and Work Samples

This appendix will provide the evaluator with a list of commonly used psychological tests and work samples that should be consulted during evaluation planning. Table 1 presents summary information on tests; Table 2 presents similar information on work samples.* The headings on Table 1 are explained as follows:

Psychological Tests

Name - Full name as listed in The Eighth Mental Measurements Yearbook and in test manual.

Scores - What are the scores and how are they presented?

Norm Groups - Major norm groups are listed.

Administration - Individual or group? Total administration time. Special requirements, paper-and-pencil or apparatus? Estimated reading level.

Publisher - Where available.

The tests are classified according to their listing in The Eighth Mental Measurement Yearbook (Burros, 1978), beginning with literacy and achievement and concluding with specific aptitudes. The few tests included under each heading are the ones most commonly used with many industrially injured workers.

Table 2 contains information on work samples. In selecting work samples for this chart, only work samples designed to be administered independently were selected. Thus, these work samples were not originally designed to be part of a unified evaluation system. The following information is given on each work sample:

Work Sample:

Name - The name and identification number, if any, as it is listed in the particular work sample manual.

DOT Code - The specific DOT job title and code for each occupation(s) that is closely related to the task contained in each work sample is listed. When tasks relate to a wide variety of occupations, these are indicated by "X's" for the middle three digits and "0's" for the last three digits of the DOT code (e.g., 720.XXX-000). In such cases, the occupational group is the critical factor. Some work samples assess

*Page 163 contains the addresses of all test publishers and work sample developers listed on Tables 1 and 2.

general skills, dexterities, and physical demands that are relevant to numerous occupations; these are designated as "all industries" and are listed separately.

Specific Tasks - This is a brief listing of the major tasks in each work sample and, to some degree, of the specific skills and aptitudes needed to perform these tasks. Because the assessed tasks could relate to job areas and specific skills other than those listed, this task description is the most important selection factor.

Administration - Basic administration considerations are given in the following order: client's physical capacity required for administration (e.g., seated, standing, bending); total administration time (e.g., 1-1/2 to 1-3/4 hours); method of giving instructions to the clients (e.g., oral and demonstration, self-instruction; audiovisual); and scoring (e.g., time and quality). Total administration time includes client orientation, evaluator instruction and demonstration, and the client's time to complete the work sample. It does not include scoring time. The times are based on norms and total administration times in their respective manuals. When these are not available, estimated times are used. In conjunction with scoring, the word "norms" is used only when the work sample has empirically or predetermined time standard derived norms. The term "standards" means only that objective scoring material are available.

Source - The manufacturer or the distributor. All work samples on this chart are from four sources: Valpar Component Work Sample Series; Vocational Evaluation System by Singer; Prep, Inc. - Comprehensive Occupational Assessment System, and the MDC Work Sample Manual Clearinghouse. MDC does not sell work sample hardware; each work sample in the Clearinghouse can be reproduced from a standard manual.

The work samples are classified according to the nine Occupational Categories as listed in the DOT. An additional category of "All Occupations" was added to include work samples that evaluated aptitudes, physical capabilities and dexterities that are common to many occupations.

In addition to or instead of the work samples listed on Table 2, the evaluator may choose to use an entire work evaluation battery. If a general assessment of most major occupational aptitudes is needed in a short time, the Career Evaluation System (i.e., Hester) and the System for Assessment and Group Evaluation (SAGE) could be used. Both of the systems can be administered in less than five hours and both result in a computer-generated job list based on the DOT (Botterbusch, 1982). Finally, the Micro-TOWER would provide an in-depth assessment of vocationally relevant aptitudes.

Table 1

Psychological Tests - Literacy and Achievement

Name	Scores	Norm Groups	Administration	Publisher
Adult Basic Learning Examination (ABLE)	6th grade-equivalent-verbal (vocabulary, reading, spelling) and arithmetic (computation, problem solving and total)	students, job corp trainees and adults enrolled in basic education programs	group; Levels I and II - 2 hours Level III - over 3 hours; hand or machine scored	Psychological Corporation
Nelson-Denny Reading Test	4 percentile, grade-equivalent and standard scores - vocabulary, comprehension, total and reading rate	15,000 high school students; college and adult	group; 35 minutes; separate answer sheet; hand or machine scored	Houghton Mifflin
Wide Range Achievement Test (WRAT)	3 percentile, grade-equivalent or standard scores - spelling, arithmetic and reading	By age groups from age 5 to 64. Sample sizes for adults N = 400. No national samples.	group, 30 minutes; record answers in book; hand scored	Jastak Associates, Inc.

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Name	Scores	Norm Groups	Administration	Publisher
AAMD-Becker Reading-Free Vocational Interest Inventory	T scores & percentiles; separate male and female scores on specific occupational areas, e.g., animal care, food service, light industrial	EMR males & females	group or individual; 45 minutes; picture content; no reading; hand scored; disposable booklet; no reading required	American Association of Mental Deficiency
Minnesota Importance Questionnaire (MIQ)	Degree of importance of 20 need areas, e.g., advancement, authority, co-workers, social status	5,000 employed persons	group or individual; 40 minutes; separate answer sheet; reuseable booklets; machine scoring; recommended 6th grade reading level	Vocational Psychology Research
Strong-Campbell Interest Inventory (SCII)	Several types of scores: 6 general themes; 23 basic interest scales; 124 occupational scales; 9 special indexes	separate occupational group for each scale	group or individual; 30 minutes; items printed on answer sheet; computer scored; 8th grade reading level	Standford University Press
Wide Range Interest-Opinion Test (WRIOT)	T scores; 18 clusters of occupations, e.g., scales; social service; machine operation; 7 vocational attitudes, e.g., ambition, risk; skill level	adults, high school students; no national samples	group or individual; 40-60 minutes; all content pictures; separate answer sheet. No reading required. Hand or machine scored.	Jastak Associates, Inc.

Name	Scores	Norm Groups	Administration	Publisher
Differential Aptitude Test (DAT)	Percentiles & stanines: 9 aptitude scores - verbal reasoning, numerical ability, abstract reasoning, clerical, mechanical reasoning, space relations, spelling, language usage, and general mental ability	63,000 high school students	group; 4 hours, separate answer sheet; reuseable books; hand or machine scored; 6th grade reading	Psychological Corporation
General Aptitude Test Battery (GATB)	Standard scores: 9 aptitude scores - G-general learning ability; V-verbal; N-numerical; S-spatial perception; P-form perception; Q-clerical perception; K-motor coordination; F-finger dexterity; M-manual dexterity	4,000 workers; high school students	group; includes apparatus; 2½ hours; separate answer sheets; reuseable books; hand or machine scored; 6th grade reading	U.S. Employment Service
Revised Beta Examination (second edition) Beta II	Single non-verbal intelligence score - presented as IQ or percentile	1,050 adults, nationwide	group or individual; 30 minutes; expendible test booklets; hand scored; no reading required	Psychological Corporation
SRA Pictorial Reasoning Test (PRT)	Single percentile for general intelligence; designed to be culturally fair	high school; employed worker norms; separate occupations	group; 25 minutes; self-scoring booklet; no reading required	Science Research Associates

Name	Aptitude/Scores	Norm Groups	Administration	Publisher
Clerical				
General Clerical Test (GCT)	Percentiles; 4 scores: clerical speed and accuracy; numerical ability; verbal facility; and total	high school, job applicants and employed workers	group; 55 minutes; answers marked in test booklet; hand scored	Psychological Corporation
Minnesota Clerical Test (MCT)	Percentiles - 2 scores: number comparison and name comparison. Ability to rapidly perceive and differentiate between numbers, letters and other symbols	high school students, employed workers	group; 20 minutes; answers marked in booklets; hand scored	Psychological Corporation
SRA Typing Skills	Percentiles - 2 scores: net speed and accuracy	job applicants	group or individual; 15 minutes; hand scored	Science Research Associates
Dexterity				
Crawford Small Parts Dexterity Test	Fine eye-hand coordination; finger dexterity. Two percentile scores: pins and collars; screws	job applicants; high school students, employed assemblers	individually; apparatus seated; 20 minutes time to completion	Psychological Corporation

Name	Aptitude/Scores	Norm Groups	Administration	Publisher
Hand-Tool Dexterity Test	Ability to use ordinary mechanics' hand tools; a single percentile score; manual dexterity	job applicants, employed workers, apprentices	individually; apparatus; standing; 20 minutes time to completion	Psychological Corporation
Purdue Pegboard	Finger dexterity; bimanual dexterity; eye-hand coordination. 5 percentile scores: right hand; left hand; both hands; right plus left plus both hands; and assembly	employed workers; general populations	group; apparatus; seated; 10 minutes; number placed in time line	Science Research Associates
Mechanical				
Bennett Mechanical Comprehension Test	Understand relationship of physical forces and mechanical elements in practical situations. A single percentile score on mechanical comprehension	job applicants, employed workers, students	group; 30 minutes; separate answer sheet; hand or machine scored; 8th grade reading	Psychological Corporation
The Revised Minnesota Paper Form Board Test	Spatial aptitude; nonverbal estimate of intellectual functioning; "mechanical orientation." A single percentile score	high school students; applicants and employed workers, military	group; 20 minutes; expendable booklet or separate answer sheet; hand or machine scored; no reading required	Psychological Corporation

Table 2

O/1 - Professional, Technical and Managerial Occupations

Name	DOT Codes	Specific Tasks	Administration	Source
Drafting (#1)	Drafter, Architectural 001.261-010 Drafter, Civil 005.281-010	correct use of drafting tools, constructing line drawings, constructing a floor plan, and measuring and layout	seated; 1½ hours audiovisual client self-report quality rating	Prep/COATS
Drafting (#16)	Various Drafters, such as: Drafter, Civil 005.281-010 Drafter, Tool Design 007.261-022	blueprint reading, perception, measurements, three dimensional visualization, drawing ability	seated; 1½ to 2 hours reading required separate answer sheets time and error scores	Valpar
Drafting	Drafter, Apprentice 017.281-014	task common to many drafting jobs: use of templates, triangles, draw cut block, change scale	seated; 2½ to 3 hours audiovisual time and error score	Singer
Computer Technology (#25)	Programmer, Business 020.162-614 Programmer, Engineering and Scientific 020.167-022 Terminal Operator 203.582-054	with an Apple II computer and disk drive: starting the computer, using special purpose keys and computer commands, entering data records, working with variables, writing a computer program, making format changes to a program	seated; 2½ hours audiovisual client self-rating quality rating	Prep/COATS
Extraction Technology (#20)	Laboratory Assistant 024.381-010 Chemical-Laboratory Technician 022.261-010 Laboratory Tester 029.261-010	prepare standard solutions, perform chemical analysis and laboratory tests, use routine laboratory equipment, processing and recording data	seated; 1-3/4 hours audiovisual client self-rating quality rating	Prep/COATS

Name	DOT Codes	Specific Tasks	Administration	Source
Soil Testing	Laboratory Tester 029.261-010	the pH of soil is tested using a color chart and a pH meter. Other tests are performed	seated; 1 to 1½ hours audiovisual; writing time and error scores	Singer
Grimes Pharmacy Helper Work Sample (#104)	Pharmacy Helper 074.387-010	Assesses ability to use medical terminology, transcribe information, and accurately fill prescriptions	seated; estimate 1½ hours self-instruction quality standards	MDC
Nutrition (#17)	Dietitic, Technician 077.123-010 Dietitian, Clinical 077.127-014	planning meals to meet nutritional requirements, documenting nutritional decisions, planning institutional meals, gathering and recording patient information	seated; 1½ hours audiovisual client self-rating quality rating	Prep/COATS
Medical Services (#7)	Dental Hygienist 078.361-010 Medical Technologist 078.361-014	taking and recording vital signs, bandaging a client's arm, recording medical history, recording liquid intake and output, performing and recording urinalysis	seated; 1½ hours audiovisual client self-report quality rating	Prep/COATS
Commercial Art (#16)	Art Director 141.031-010 Illustrator 141.061-022	drawing geometric shapes and designs, cutting out shapes, using color and design elements, pasting up figures or shapes, transferring letters and figures	seated; 2-3/4 hours audiovisual client self-rating quality rating	Prep/COATS
Multi-level Sorting (#7)	Photographers 143.XXX-000 Tester 029.261-022	make decisions while performing work tasks requiring visual discrimination of colors, color-numbers, color letter and a combination color-letter-number	seated; 15-20 minutes oral/demonstration time and error scores	Valpar

Name	DOT Codes	Specific Tasks	Administration	Source
Radio Announcing Work Sample (#103)	Announcer 159.147-010 Disk Jockey 159.147-014	assesses ability to plan and organize, facility with language, speaking poise, and ability to relate to audience	seated; 1 hour self-instruction time and quality ratings	MDC

2 - Clerical and Sales Occupations

Name	DOT Codes	Specific Tasks	Administration	Source
Clerical Comprehension and Aptitude (#5)	Stenography, Typing, Filing and Related 201.XXX-000 to 209.XXX-000	3 separate sections: general clerical, bookkeeping and typing. Scores on: telephone answering, mail sorting, filing, bookkeeping, typing	seated; 2 to 3 hours oral/demonstration/ reading instructions time and error scores	Valpar
Typist Work Sample (#206)	Typist 203.582-066	assesses speed and accuracy in typing statistical information, final report, and final letters from a handwritten copy and a rough draft	seated; estimate 3/4 hour oral, written and typed copy, words per minute	MDC
Clerical/ Office (#2)	File Clerk, I 206.362-010 Clerk, General 209.562-010 Receptionist 237.367-038	several general clerical tasks: making appointment calendar, memo from a phone call, typing, filing, lists and prepares letters for mailing, adding and preparing itemized bills, and collating	seated; 1-3/4 hours audiovisual client self-report quality rating	Prep/COATS

Name	DOT Codes	Specific Tasks	Administration	Source
Numerical Sorting (#3)	File Clerks 206.XXX-010 Production and Stock Clerks 224.XXX-010	sorting by number sequence, some visual perception	seated; 15 minutes oral/demonstration instruction time and error scores	Valpar
Mail Sorting and Postal Calculation Work Sample (#214)	Mail Clerk 209.587-026 Post Office Clerk 243.367-014 Mail Handler 209.687-014	assesses the ability to sort mail alphabetically, weigh mail, classify mail by weight, and to calculate postage	standing/reaching estimated 2 hours oral/demonstration written responses quality standards	MDC
Bookkeeping (#18)	Bookkeeper I 210.382-014 Bookkeeper II 210.382-018 Audit Clerk 210.382-010 General-Ledger Bookkeeper 210.382-046	preparing forms and records, operating adding, accounting, or calculating machines, checking reviewing source documents and records, recording information into journals or ledgers	seated; 2¼ hours audiovisual client self-rating quality rating	Prep/COATS
Bank Teller Work Sample (#211)	Teller 211.362-018 Money Counter 211.467-014	ability to learn to apply bookkeeping procedures, attention to detail in exchanging money, and ability to record transactions accurately	seated; estimate 1½ hours self-instruction manual written responses quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Sales (#4)	Cashier I 211.362-010 Sales Clerk 290.477-014 Salesperson, General Merchandise 279.357-054	stamping costs, recording food and beverage orders, setting up a cash drawer and making change, recording credit card purchases, and filing	seated; 1-3/4 hours audiovisual client self-report quality rating	Prep/COATS
Money Handling (#13)	Cashier II 211.462-010 Cashier-Checker 211.462-014 Toll Collector 211.462-038 Sales Clerk 290.477-014	3 sections: money recognition, change making, consumer economies	seated; 60-70 minutes reading of multiple choice items separate answer sheet	Valpar
Money Handling Assessment Sample (#203)	Toll-Collector 211.462-038	assesses the ability to do basic arithmetic, make change, and recognize different money denominations	seated or standing; estimate 1/2 hour self-administered quality standards	MDC
Gilbertson Basic Accounting Work Sample (#208)	Accounting Clerk 216.482-010	assesses the ability to read and understand accounting terminology, to record transactions in a basic accounting format and to complete a trial balance from the information provided	seated; estimate 1-3/4 hours self-instruction manual quality standards	MDC
McNallie Desk Calculator Work Sample (#207)	Calculating-Machine Operator 216.482-022 Adding Machine 216.482-014	assesses the ability to read required mathematical operations, compute answers by using a desk calculator, and record the results	seated; estimate 1/2 hour self-instruction quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Data Calculation & Recording	Calculating Machine Operator 216.482-022	operates an electronic calculator to: complete a weekly payroll, total columns, and reconcile a quarterly report	seated; 2 to 4 hours audiovisual, writing time and error scores	Singer
Real Estate (#22)	Real Estate Clerk 219.362-046 Guide, Real Estate 297.667-010	performing clerical office duties, handling information, contracts and mortgage payment books, performing computations	seated; 1¼ hours audiovisual client self-rating quality rating	Prep/COATS
Filing, Shipping & Receiving	Shipping and Receiving Clerk 222.387-050	several tasks: file by letters and numbers, compare purchase orders and packing slips, complete receiving records, weigh, measure, and determine postage for five packages, file purchase orders	standing/seated 1½ to 2½ hours audiovisual time and error scores	Singer
Shipping and Receiving Freight Handling Work Sample (#201)	Retail Receiving Clerk 222.387-050 Distribution Clerk 222.587-018	assesses the ability to route packages and mail for shipment by zone, weight, class and scale numbers and determine costs of shipment by utilizing postage charts	seated; 1 hour oral/demonstration quality standards	MDC
Johnson Shipping Clerk Job Sample (#205)	Shipping Clerk 222.387-050	assesses the ability to locate parcels for shipping from order list, pack them in appropriate cartons securely, and apply shipping labels	stand, lift/carry, stoop, kneel estimate 1 hour oral/demonstration quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Order Picking Work Sample (#204)	Distributing Clerk 222.587-018	assesses the ability to prepare an order for shipment. Requires the ability to count and compare items listed on the order sheet against the order, handle office supplies and place them in a designated container	stand, reach; estimate 1 hour oral/demonstration quality standards	MDC
Travel Services (#8)	Ticket Agent 238.367-026 Reservations Agent 238.367-018	filling in a sales memo, filling in an airline ticket form, completing a universal credit change form, preparing an itinerary, calculating costs, tax and commission	seated; 1½ hours audiovisual client self-report quality rating	Prep/COATS
Rasmussen Bus Ticket Agent Work Sample (#213)	Ticket Agent 238.367-026	assesses the ability to follow a self-instruction manual and ability to plan schedules for customers according to their needs	seated; 3 hours self-instruction manual written responses time and quality norms	MDC
Travel Counselor Work Sample (#212)	Travel Agent 252.157-010	assesses the ability to arrange complete vacations including transportation and accommodations, understand oral instructions, use tour guides and airline directories, and ability to perform clerical operations	seated; estimate 2½ hours orally, written responses time and quality standards	MDC
Hook Parts Salesperson Work Sample (#210)	Salesperson Parts 279.357-062 Salesperson General Merchandise 279.357-054	assesses the ability to work with mock customers face to face, make change, operate a calculator, stock shelves, use a catalog and record information accurately	stand, stoop, bend, reach; 2 hours self-instruction manual role-playing written orders quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Sales Processing	Sales Clerk 290.477-014 Salesperson, General Merchandise 279.357-054	3 separate tasks: complete change-card form, take a telephone order for merchandise, and compute shipping and sales tax on ordered items	seated; 1½ to 2 hours audiovisual time and error scores	Singer
Thompson Telephone Work Sample (#209)	Telephone Solicitor 299.357-014 Membership Solicitor 293.357-022 Traffic Agent 252.257-018	assesses the ability to perform interviewing, sales, and customer service work over the telephone. Ability to accurately record and compute data in a standardized form is also assessed	seated; estimate 1 hour self-instruction manual role-playing quality standards	MDC

3 - Service Occupations

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Name	DOT Codes	Specific Tasks	Administration	Source
Food Preparation (#6)	Cook, Pastry 313.381-026 Cook 313.361-014 Kitchen Helper 318.687-010	measuring dry ingredients and baking a cake, making coffee, calculating recipe increases, making frosting, and preparing ingredients as per recipe	standing/seated; 3½ hours audiovisual client self-report quality rating	Prep/COATS
Cooking & Baking	Cook 313.361-014	bakes a shortcake using a microwave oven: knead and shape dough, operate oven, apply topping to dessert	seated/standing; 1½ to 2 hours audiovisual time and error scores	Singer

Name	DOT Codes	Specific Tasks	Administration	Source
Barbering/ Cosmetology (#9)	Barber 330.371-010 Cosmetologist 332.271-010 Hair Stylist 332.271-018	giving a basic haircut, performing a dry shampoo, measuring head for fitting a wig, cleaning wig, sales	standing/bending; 1-3/4 hours audiovisual client self-rating quality rating	Prep/COATS
Cosmetology	Cosmetologist 332.271-010	using a mannequin to: cut hair, curl hair, shampoo, comb dry and style hair	standing/bending 2 hours audiovisual time and error scores	Singer
Medical Service	Nurse Aide 355.674-014 Orderly 355.674-018	4 tasks: place elastic bandage on artifical arm, take temperature, pulse and respiration rates, records liquid intake/output, makes tests for "diabetic urine"	seated; 1½ to 2 hours audiovisual writing time and error scores	Singer
Clothing & Textiles (#21)	Presser, Hand 363.684-018 Marker I 781.384-014 Sewing Machine Operator, Regular Equipment (Master Title)	marking, cutting, operating a sewing machine, sewing with machine, pressing, inspecting	seated, standing, reaching; 2¼ hours audiovisual client self-rating quality rating	Prep/COATS
Fire Science (#19)	Fire Fighter 373.364-010 Fire Captain 373.134-010 Fire Marshal 373.167-018	desk duties, testing and maintaining equipment, advising on fire prevention and false alarms, assessing fire scenes and aiding victims, routing and positioning apparatus at fire scene, using special equipment to extinguish or reduce fires	seated; 45 minutes	Prep/COATS

Name	DOT Codes	Specific Tasks	Administration	Source
Police Science (#13)	Police Officer 375.263-014 State Highway Police Officer 375.263-018 Desk Officer 375.137-014	obtaining and using information, performing patrol activities, developing and maintaining community relations, performing traffic duties, searching and seizing evidence, arresting suspects	seated; 2½ hours audio-visual client self-rating quality rating	Prep/COATS
Roundtree Police Radio Operator Work Sample (#301)	Radio Dispatcher 379.362-010 Water Service Dispatcher 954.367-010	assesses the ability to work as a police radio dispatcher. Involves recording and transmitting information accurately, operating recording equipment and reading a map and code sheets	seated; 2 hours audio-tape self-instruction manual quality standards	MDC

4 - Agricultural, Fishery, Forestry and Related Occupations

Name	DOT Codes	Specific Tasks	Administration	Source
Mikelson-Rossi Potting Work Sample (#402)	Horticultural Worker I 405.684-014	assesses the ability to work with another client to fill plastic pots with soil. Judgment as to how much and how tight each pot will be filled is also assessed	standing/bending/reaching 15 minutes oral/demonstration time and quality norms	MDC

5 - Processing Occupations

Name	DOT Codes	Specific Tasks	Administration	Source
Production Machine Operating	Injection-Molding Machine Operator 556.382-014	tasks related to machine tending: mixing colors with plastics, set up injection molding machine, "production-run," and purge machine	standing; 1½ to 2 hours audiovisual time and error scores	Singer

6 - Machine Trades Occupations

Name	COT Codes	Specific Tasks	Administration	Source
Tri-level Measurement (#10)	Machinist 600.280-022 Machine Set-Up Operator 600.380-018 Inspector, Tool 601.281-022 - other precise inspections	crude to fine inspection and measurement in the machine trades, visual and instrument use	seated; 30-35 minutes oral/demonstration time and error scores	Valpar
Electric Foot Stapler Operator	Punch Press Operator II 615.685-030 Power Press Tender 617.685-026	assesses interest and ability to do routine work related to machine tending. Industrial production norms provided	standing/reach; estimate 1 hour oral/demonstration learning curve	MDC
Small Tools (Mechanical) (#1)	Mechanical Repair 620.XXX-000 to 630.XXX-000 - some structural work	ability to work with small tools, use hands and tools in small, difficult places	standing/seated; 1 hour oral/demonstration instructions time and error scores	Valpar

Name	DOT Codes	Specific Tasks	Administration	Source
Automotive (#15)	Automobile Mechanic 620.261-010 Automobile-Mechanic Apprentice 620.261-012 Automobile-Mechanic Helper 620.684-014	using reference materials, assembly/disassembly parts, repairing parts-battery connector and brake cylinder, tail light	seated; 1½ hours audiovisual client self-rating quality rating	Prep/COATS
Minor Tune-Up Work Sample (#605)	Automobile Mechanic 620.261-010 Motorboat Mechanic Helper 623.684-010	assesses the ability to perform a minor tune-up on a simulated ignition system	seated; estimate 1½ hours self-instruction manual quality standards	MDC
Russo Carburetor Disassembly-Assembly Work Sample (#606)	Automobile Mechanic 620.261-010 Motorcycle Repairman 620.281-054 Small Engine Mechanic 625.281-034	assesses the ability to disassemble and assemble a carburetor according to a written manual	seated; estimate 2 hours self-instruction manual time and quality standards	MDC
Radiator Flushing and Winterizing Work Sample (#607)	Automobile-Radiator Mechanic 620.381-010 Automobile-Service Mechanic 620.261-010	assesses the ability to correctly flush and winterize a radiator according to a set of specific written and pictorial instructions	standing/bending estimate 1½ hours self-instruction manual quality standards	MDC
Engine Service	Small Engine Mechanic 625.281-034	using a 4-cycle lawn mower engine, disassembled and checked; changes oil, adjusts points, and reassembles	standing; 2½ to 3 hours audiovisual time and error scores	Singer

Name	DOT Codes	Specific Tasks	Administration	Source
Dahl-Holmes Small Engine Work Sample	Small Engine Mechanic 625.281-034	assesses the ability to disassemble and reassemble a small engine, identify parts and functions, and ability to use hand tools	standing/reaching estimate 2 hours self-instruction manual test; quality standards	MDC
Small Engines (#10)	Small Engine Mechanic 625.281-034 Power-Saw Mechanic 625.281-030 Outboard Motor Mechanic 623.281-042	perform the following tasks with a small engine: change oil, air cleaner maintenance, testing electrical system, spark plug maintenance, perform compression test	standing/seated; 1½ hours audiovisual client self-rating quality rating	Prep/COATS
Refrigeration & Air Conditioning	Refrigeration Mechanic 637.261-026	4 separate tasks: measure, cut and bend copper tubing, sweat solder tubing and fittings, pressure fixture and check for leaks, repair single electrical circuits	seated/standing; 1½ to 3 hours audiovisual time and error scores	Singer
Refrigeration (#24)	Refrigeration Mechanic 637.261-026 Refrigeration Mechanic Helper 637.687-014	installing mechanical components, testing mechanical components, installing electrical components, testing electrical components	seated/standing; 2-3/4 hours audiovisual client self-rating quality rating	Prep/COATS
Spielman Bicycle Wheel Truing Work Sample (#603)	Bicycle Repairer 639.681-010	assesses the ability to true a wheel, use of hand tools, following specific directions, and ability to do repetitive tasks	standing/reaching estimate 1 hour self-instruction manual quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Soldering & Inspection (Electronics) (#12)	Solderer (Jewelry) 700.381-050 Solderer, Torch I & II 813.684-026 813.684-010 -many electrical and electronic bench assembly occupations	graduated difficulty levels of basic soldering skills	seated; 20-25 minutes oral/demonstration time and error scores	Valpar
Sample Making	Metal Finisher 705.684-034	use of hand tools, measuring, design	seated/standing; 2-3 hours audiovisual time and error scores	Singer
Simulated Assembly (#8)	Many Benchwork Occupations, especially electric equipment (720.XXX-000 to 729.XXX-000) and products made from assorted materials 730.XXX-000 to 739.XXX-000	bench assembly tasks - repetitive bilateral use of upper extremities	seated or standing; 25 minutes oral/demonstration assembly speed controlled by evaluator. Number of correct assemblies in 20 minutes	Valpar
Electrical Circuitry and Print Reading (#15)	Television and Radio Repairer 720.281-018 Final Tester 721.261-014 Electrical Inspector 825.381-026	ability to understand and apply the principles and functions of electrical circuits. Three sections: circuit continuity, circuit testing, and circuit application	seated; 50-60 minutes oral/demonstration answer sheet time and error scores	Valpar

Name	DOT Codes	Specific Tasks	Administration	Source
O'Rourke Small Appliance Repair Work Sample (#715)	Electrical Appliance Repairer 723.382-010	assesses the ability to trouble-shoot defective appliances, make appropriate repairs, and record information accurately	seated; estimate 1 hour oral quality standards	MDC
Electronics Assembly	Electronics Assembler 726.684-018	lay out and assemble a printed circuit board, soldering components, and wiring harness	seated; 2-3 hours audiovisual time and error scores	Singer
Strand Resistor Inspecting and Testing (#708)	Electronics Tester II 726.684-026	assesses the ability to inspect, determine values of, accept, or reject resistors based on testing and accuracy of calculation	seated; estimate 2 hours self-instruction client records answers time and quality standards	MDC
Electronics (#14)	Electronics Worker 726.687-010 Electronics Tester II 726.684-026 Electronics Assembler 726.684-018	common electronics tasks: stuffing components into a circuit board, assembling a wire harness, testing for continuity, testing with voltage, hand wiring	seated; 3½ hours audiovisual client self-rating quality rating	Prep/COATS
Giese Electrical Wiring Work Sample	Appliance Repairer 723.584-010 Assembler I (elec. equip.) 729.687-010	asseses the ability to use hand tools to wire three-way wall switches according to a wiring diagram	seated; estimate 40 minutes oral/demonstration time and quality standards	MDC
Revised Tomcheck/ Brown Eye-Hand-Foot Coordination Work Sample (#713)	Coil Winder 724.684-026 Rasper 788.684-094	assesses the ability to repetitively assemble an aluminum block to a nut and bolt using a power screwdriver controlled by a foot pedal	seated; estimate 1 hour oral/demonstration quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Wire Harness Assembly Work Sample (#710)	Cable Maker 728.684-010	subcontract work sample. Assesses the ability to assemble seven different colored wires into a bundle or harness, according to a prescribed plan	seated; estimate 1 hour oral/demonstration time and quality standards	MDC
Stout U-Bolt Assembly Work Sample (#705)	Assembler (Ammunition) 737.687-010 Assembler (Pen & Pencil) 733.685-010 Assembler, Toy Voices (Toys & Games) 731.687-034 Dial Brusher (Watch & Clock) 715.687-022	assesses the ability to assemble 200 U-bolts units using U-bolts, nuts, straps, and ferrules in four, 50 unit trials	seated/reaching; 2 to 3 hours oral/demonstration time and quality norms	MDC
Bench Assembly	Assembler, Oil Filters 739.687-026 Assembler, Small Products 739.687-030	bench assembly work activities. Repetitive use of hand tools: nut drivers, screwdrivers, and wrenches	seated; 2 to 2½ hours audiovisual time and error scores	Singer
Pioneer Pen Assembly Job Sample (#714)	Assembler, Small Products 739.687-030	subcontract work sample. Assesses the ability to perform a multiple step small parts assembly	seated; 80 minutes oral/demonstration time and quality norms	MDC
Tire Balancing Work Sample (#716)	Tire Balancer 750.687-014	assesses the ability to follow verbal instructions, use a balancer and read bubble guage, and apply appropriate weights to wheel	standing, stooping, kneeling, reaching estimate 2 hours oral/demonstration quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Wood Working	Case Fitter 763.684-026	construct a small shelf: measure, cut, miter box, router, drill, nail and screw shelf; stain - use of hand and power wood working tools	standing/seated; 2½ to 4½ hours audiovisual time and error scores	S[illegible]inger
Hurley Upholstery Job Sample (#707)	Upholsterer, Outside 780.684-118	subcontract work sample. Assesses the ability to assemble and staple a fitted polyethylene sheet and foam rubber to a plywood board to make boat bench seats	seated/standing/ estimate 30 minutes oral/demonstration time and quality standards	M DC

8 - Structural Work Occupations

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Name	DOT Codes	Specific Tasks	Administration	Source
Sheet Metal	Sheet Metal Worker 804.281-010	construct a utility box: Lay out sheet metal, mark, scribe and cut, punch holes, bend metal in break, pop rivet together	standing/pushing 2 to 4 hours audiovisual time and error scores	S[illegible]nger
Metal Construction (#3)	Sheet Metal Worker 804.281-010 Metal-Fabricating-Shop Helper 619.686-022	measuring, scribing, cutting, bending and soldering sheet metal, cutting and soldering pipe	seated/standing/bending 2¼ hours audiovisual client self-report quality rating	P[illegible]ep/COATS

Name	DOT Codes	Specific Tasks	Administration	Source
Schneck Arc Welding Work Sample (#804)	Welder, Arc 810.384-010	assesses the ability to arc weld by passing a safety test, striking a bead ten times, running and cleaning a bead ten times, tacking, butt welding two metal plates, and fillet welding two metal plates by using an arc welder, steel plates, electrodes, chipping hammer, wire brush, and protective welding clothing	standing; estimate 2½ hours audiovisual self-instruction manual knowledge tests time and quality score	MDC
Oxy-Acetylene Welding and Cutting Work Sample (#803)	Gas Welder 811.684-014	assesses the ability to safely use welding equipment to weld and cut metal, ability to comprehend written directions and specifications, and ability to learn safety instructions	standing; estimate 2½ hours self-instruction manual time and quality scores	MDC
Welding & Brazing	Welder, Gas 811.684-014	using gas welding equipment to: run "puddles" and beads, tack weld, butt weld and cut	standing/bending; 1½ to 3 hours audiovisual time and error scores	Singer
Communication Services (#23)	Public Address Servicer 823.261-010 Station Installer and Repairer 822.261-022	installing equipment, preparing cable and wire, connecting equipment, testing equipment, replacing equipment	seated/standing; 2½ hours audiovisual client self- rating quality rating	Prep/COATS
McClung House Wiring Work Sample (#805)	Electrician 824.261-010 Electrician Helper 829.684-022	assesses the ability to read schematic diagrams and wire 1, 2, and 3-way switches according to a series of written instructions	seated; estimate 1½ hours oral	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Electrical (#12)	Electrician 824.261-010 Electrician, Apprentice 824.261-014 Electrician 824.681-010	using reference resources, running cable and wire, installing boxes and fixtures, stripping and splicing wires, testing circuits	standing/seated; 3-3/4 hours audiovisual client self-rating quality rating	Prep/COATS
Household & Industrial Wiring	Electrician Helper 829.684-022	5 tasks: measure and cut electrical cable, run cable, wire light fixture, switch and outlet, inspect installation, and attach 3 prong plug	standing/bending; 2½ to 4 hours audiovisual time and error scores	Singer
Electrical Wiring	Cable-Splicer Helper 829.667-010	wiring tasks: splicing wire, solder with gun and iron, tape splices	seated; 2 to 3½ hours audiovisual time and error scores	Singer
Wood Construction (#5)	Carpenter 860.381-022 Carpenter Apprentice 860.381-026	estimating square footage, number of rafters and shingles, measuring and layout, constructing wood frames and interior trim	standing; 2½ hours audiovisual client self-report quality rating	Prep/COATS
Adams Construction Layout Work Sample (#80)	Carpenter 860.381-022 Form Builder 860.381-046	assesses the ability to use layout tools, follow pictorial and written instructions, measure accurately, follow a prescribed method for "squaring up" a layout, and make judgments pertaining to tolerance limits	standing/bending/stooping estimate 2 hours self-instruction time and quality standards	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Masonry (#11)	Bricklayer 861.381-018 Bricklayer, Apprentice 861.381-022 Cement Mason 844.364-010	several construction tasks: measuring and layout, calculating supplies, mixing mortar, breaking bricks, laying mortar and bricks and finishing the wall	standing/seated; 3¼ hours audiovisual client self-rating quality rating	Prep/COATS
Masonry	Bricklayer Apprentice 861.381-022	separate tasks: mixes mortar, cuts brick, and lays a corner of brick	standing/bending/lifting 1 hour audiovisual time and error scores	Singer
Plumbing Maintenance Work Sample (#802)	Plumber 862.381-030 Plumbing Hardware Assembler 706.684-086	assesses the physical capacity and tool using ability needed to connect faucets, pipes, and valves and to repair parts of a sink and toilet	standing/bending/stooping/reaching estimate 2½ hours self-instruction time and quality standards	MDC
Plumbing & Pipe Fitting	Plumber, Apprentice 862.381-034	measure, mark, cut and thread galvanized and plastic pipe, assemble piping in vanity, install P-trap and faucets in sink, repair faucet	standing/kneeling/reclining; 2½ to 4 hours audiovisual time and error scores	Singer
Solar Technology (#26)	no specific occupations listed in DOT	assembling, attaching and installing mechanical components, cutting tubing to size, preparing tubing for soldering, soldering tubing, connecting electrical components, operating a solar system	seated/standing; 1½ hours audiovisual client self-rating quality rating	Prep/COATS

Name	DOT Codes	Specific Tasks	Administration	Source
Sonnett Credit Sales Work Sample (#901)	Automobile Self-Service Station Attendant 915.477-010	assesses the ability to make simple computations and use a credit card processor accurately	seated; 30 minutes oral time and quality standards	MDC
Ogren Automobile Washing Work Sample (#906)	Automobile Washer 919.687-014	assesses the ability to wash and wax the interior and exterior of a car, ability to bend, kneel and reach, and ability to work independently	standing/bending/stooping/reaching; 3 hours oral and demonstration time and quality scores	MDC
Stinchcomb Nut and Bolt Packaging Work Sample (#902)	Packager, Hand 920.587-018	subcontract work sample. Assesses the ability to lift objects weighing up to 40 pounds, set up a work area, hand package 16 nuts and bolts into 75 paper sacks, and replace unused material to storage area	lifting/pushing/reaching/seated; estimate 1½ hours oral and demonstration time and quality	MDC
Packaging & Materials Handling	Packager, Hand 920.587-018	7 separate tasks: seal boxes with tape dispenser, assemble cardboard dividers, package breakable items, follow packing orders, band cartons, stencil, operate a hand truck	standing/seated/bending 45 to 90 minutes audiovisual time and error scores	Singer
Johnson Machine Packaging Work Sample (#903)	Packager, Machine 920.685-078	subcontract work sample. Assesses the ability to package by hand, washers, nuts and bolts into a paper envelope, staple a header onto the envelope, and place it in a box according to prescribed instructions	seated/reaching estimate 1½ hours oral and demonstration one time; 2 quality scores	MDC

Name	DOT Codes	Specific Tasks	Administration	Source
Photo Lab Technician	Reproduction Technician 976.361-010 Developer 976.681-010	separate tasks: take 12 black and white pictures, mix developer, stop bath and fixer, develop film, dry negatives, make contact prints	seated; 3 to 3½ hours audiovisual time and error scores	Singer

All Occupations

Name	DOT Codes	Specific Tasks	Administration	Source
Eye-Hand-Foot Coordination (#11)	Most production - machine occupations with foot controls; driving occupations	coordinated use of hands/eyes and feet	seated; 15-20 minutes oral/demonstration time and error scores	Valpar
Independent Problem Solving (#6)	all industries; especially clerical areas	assesses basic problem solving ability, using a pattern of geometric shapes	seated; 25-30 minutes oral/demonstration self-scoring separate answer sheets	Valpar
Integrated Peer Performance (#14)	Any industry, especially small parts assembly in electrical; electronics; toys and games	3 levels of assembly difficulty using banana plugs, inspector position, color discrimination, finger dexterity	group; seated; 1½ to 2 hours oral/demonstration time and error scores	Valpar
Needle Trades	Sewing Machine Operator, Regular Equipment - master title	after practice with paper worksheets a fabric purse is cut and sewed	seated; 1½ to 3 hours audiovisual time and error scores	Singer

Name	DOT Codes	Specific Tasks	Administration	Source
Revised Reisterer Mechanical Aptitude Work Sample (#908)	All industries	assesses spatial relations, form perception, manual and finger dexterity. Special instructions and forms for blind clients	seated; 1/2 hour oral/demonstration time and quality scores	MDC
Road Map Reading Work Sample (#904)	All industries	assesses the ability to use a road map to locate specific places, calculate mileage, use a map key to determine highway classification and plan a main route based upon given information	seated; 40 minutes reading required time and quality norms	MDC
Size Discrimination (#2)	All industries	visual size discrimination, some finger dexterity	seated; 10 minutes oral/demonstration instructions time and error scores	Valpar
Upper Extremity Range of Motion (#4)	All industries	measures range of motion in shoulder, upper arm, forearm, elbow, wrist and hand, pain and fatigue	standing; 25 minutes oral/demonstration time and error scores recording of subjective complaints	Valpar
Whole Body Range of Motion (#9)	All industries	measures gross body movements of trunk, arms, hands, legs, and fingers while reaching, stooping, bending, etc., pain and fatigue	standing; 40 minutes oral/demonstration time scores, recording of subjective complaints	Valpar

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